CONSULTING ENGINEERS, D.P.C.

MICHAEL J. LAMOREAUX, P.E. (NY, NJ, PA, VT, VA & CT)
MICHAEL W. WEEKS, P.E. (NY, NJ & PA)
LYLE R. SHUTE, P.E., LEED-AP (NY, NJ & PA)
PATRICK J. HINES

Main Office
33 Airport Center Drive
Suite 202
New Windsor, New York 12553
phone: (845) 567-3100
fax: (845) 567-3232
e-mail: mheny@mhepc.com

Principal Emeritus:
RICHARD D. McGOEY, P.E. (NY & PA)

TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS

PROJECT:	**THE POLO CLUB SENIOR HOUSING-FSEIS**
PROJECT NO.:	**18-12**
PROJECT LOCATION:	**SECTION 39, BLOCK 1, LOT 1 & 2.12**
REVIEW DATE:	**11 DECEMBER 2020**
MEETING DATE:	**17 DECEMBER 2020**
PROJECT REPRESENTATIVE:	**ENGINEERING & SURVEYING PROPERTIES**

1. The applicant's have submitted responses to our comments dated 30 October 2020. The responses are contained a line-by-line response letter as well.

2. Significant comments from NYSDOT have been received recently. The applicant's are requested to address these comments in the context of the FSEIS process.

3. Previous comments provided to the applicant have been addressed in the responses. Additional attachments and appendices have been incorporated into the FSEIS as requested.

4. The Planning Board should evaluate the responses to all comments received as to the adequacy of the FSEIS. The FSEIS is a document generated by the Planning Board, although prepared by the applicant. Responses in the FDEIS/FEIS Will be used to prepare a findings statement which will supplement the original findings statement for the project.

Respectfully submitted,

McGoey, Hauser and Edsall
Consulting Engineers, D.P.C.

Patrick J. Hines
Principal

PJH/dns

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

Montgomery Office:
71 Clinton Street
Montgomery, NY 12549
phone: (845) 457-7727
fax: (845) 457-1899

Warwick Office:
17 River Street
Warwick, NY 10990
phone: (845) 986-7737
fax: (845) 986-0245

www.EngineeringPropertiesPC.com

December 7, 2020

Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, NY 12550

RE: POLO CLUB – RESIDENTIAL DEVELOPMENT
TOWN OF NEWBURGH
RESPONSES TO FSEIS COMMENTS

Dear Planning Board:

Please find the attached revised FSEIS narrative, with redline mark-ups for the Polo Club project. Edits have been made to the FSEIS based on the following comment letters:

- McGoey, Hauser and Edsall Consulting Engineers, D.P.C. dated October 30, 2020;
- Creighton Manning, dated November 3, 2020 and
- KALA dated October 29, 2020.

In addition, the following items are attached for your review

- FSEIS Appendix C – Revised Planting & Wetland Mitigation Plans last revised 11/06/2020
- FSEIS Appendix D addition - SWPPP Appendix 11 - Infiltration Testing & Test Pit Results dated 4/29/2020
- FSEIS Appendix E – Revised Engineer's Report for a Cost Analysis of the Private Sewer Treatment Plant and Private Sanitary Forcemain Alternative to Serve the Polo Club, last revised 11/27/2020
- FSEIS Appendix F – NYSDOT Letter dated 12/5/2019
- FSEIS Appendix G - ISO Hydrant Flow Data Summary dated August 12, 2010 & Hydrant Flow Testing Results dated November 13, 2020
- FSEIS Figure – Split Rail Fence & Gate, December 3, 2020, for Response 7.

The following is an item by item response to each comment. The comments have been reproduced to facilitate the Planning Board's review.

McGoey, Hauser and Edsall letter dated October 30, 2020:

1. *Project Summary should identify that the two tax lots identified will be combined into a single tax lot upon approval of the project.*

Response: The requested language has been added to the Project Summary section.

2. *In 1.1 the proposed action should identify the Town's definition of "Senior Citizens."*

   Response: The definition of "senior citizens" has been added to Section 1.1.

3. *Comment #4 should identify the Orange County Agricultural District that the Gardnertown Farms is part of. Applicants are offering mitigation measure incorporating the fact that neighboring property is an agricultural property protected by the NYS Right to Farm Laws.*

   Response: Language has been added indicating that Gardnertown Farms is part of Orange County Agricultural District #1

4. *#2.2 Landscaping memo from Karen Arent has been provided to address responses to landscaping comments.*

   Response: Responses to Karen Arent's review letter are provided below.

5. *Confirmation regarding the access across WPA's property for construction of the wetland mitigation area should be provided. The comment response #34 identifies a recent meeting with representatives of WPA. Access agreements should be provided.*

   Response: The applicant is currently working with WPA and its lawyer, Joseph Saffioti, Esq. to obtain a written access agreement, an executed copy of which will be provided to the Board upon completion. Although the applicant believes that such agreement will be reached, in the event that the applicant is unable to secure an access agreement from WPA, it will apply to the ACOE for a 0.05 acre temporary 12-foot-wide crossing to construct the mitigation area. A figure has been added to the SFEIS depicting the potential crossing.

6. *In response to Comment #36 the infiltration test results should be provided in the SWPPP.*

   Response: The results of the infiltration testing are attached and become Appendix 11, "Infiltration Testing Results" in the FSEIS Appendix D containing the SWPPP previously submitted. The original SWPPP Appendices 11 – 13 will move to 12 – 14.

7. *Response #38 identifies that no fencing is proposed around stormwater management facilities. The Planning Board's opinion regarding safety fences at stormwater management facilities should be addressed. Stormwater management facilities identify relatively steep grades to the facilities. Aquatic benches and safety benches should be incorporated into the design for the Planning Board to consider not providing fencing.*

   Response: The response has been revised to indicate the applicant will provide a wooden split rail fence with black welded wire mesh around the stormwater management facilities. A figure detailing the proposed fencing is attached and will be added to the full plan set.

8. *In response to traffic comment #8 any recent correspondence with NYSDOT should be provided in the FSEIS.*

Response: The response from NYSDOT to Maser's FOIL request dated December 5, 2019 has been included in Appendix F of the FSEIS. This information was utilized in the preparation of the Traffic Impact Study prepared by Maser Consulting P.A. dated December 9, 2019 and was included in the SDEIS at Appendix C.

9. *Response Comment #10 in the Traffic Section should identify all proposed traffic mitigation measures rather than deferring the improvements to the Highway Work Permit process.*

   Response: Comment #10 has been revised to identify all traffic mitigation measures proposed by the Applicant. Improvements to the State highway system are subject to NYSDOT approval and are part of the Highway Work Permit review process.

10. *Documentation for the response from the Town's Water Operator to Comment #39 should be provided in the FSEIS. Testing of the hydrant in the vicinity of Jeanne Drive should be performed and provided in the FSEIS.*

    Response: Additional hydrant flow testing was conducted by Engineering & Surveying Properties at the hydrant located at the intersection of Jeanne Drive and NYS Route 300 on November 13, 2020. The new flow and pressure results were slightly lower but similar in magnitude to the 2010 ISO results and are not expected to significantly alter the expected pressure and flow in the Polo Club development. Both the 2010 and 2020 results have been added to the FSEIS as Appendix G. Revised WaterCAD calculations will be prepared using the 2020 results prior to submission to the OCHD for water main extension approval.

11. *Page 21 second paragraph identifies "the treated waste water being discharged into the on site stream will be much cleaner than that which is being discharged from nearby septic systems." Septic systems are not designed to discharge to surface water. This sentence should be removed and/or modified as appropriate.*

    Response: The sentence has been removed.

12. *In response to Sanitary Sewer Comment #2, the Applicant should address whether the proposed Treatment Plant will be equipped with an emergency generator to assure treatment during power outages.*

    Response: As required by NYSDEC, the proposed Treatment Plant will be equipped with an emergency generator to assure treatment during power outages. Language regarding the generator has been added to Sanitary Sewer Comment #2.

13. *The response identifies that the force main would be within the NYSDOT right of way and not on private property, however the third bullet item on page 24 identifies the need for easements. The Route 300 force main would not require private easements. The response identifies the process for obtaining NYSDOT approval for installation of utilities within the states right of way. The identified process is written in the narrative as being hurdles to approval while they are in fact typical review process approvals for projects within State Highway right of ways.*

Response: The third bullet regarding easements has been deleted and the language of the paragraph modified. Based on Maser's discussion with the NYSDOT, since the forcemain would be privately owned and therefore a private application, as opposed to a municipal or joint application between the municipality and the owners, it would not be a typical approval process. The applicant would not only need to seek approval for construction but obtain a Use & Occupancy permit to have these improvements within the right of way. This agreement requires additional legal approvals from the NYSDOT Real Estate Division and the Attorney General's office.

14. *The narrative identifies that maintaining the force main would be the responsibility of the Town of Newburgh, however, under the current proposal the force main would be privately owned and not owned or operated by the Town of Newburgh.*

Response: The narrative has been revised to indicate that the force main would be a privately owned and maintained improvement.

15. *Page 26 once again identifies discharge from residential septic systems. Page 26 also reiterates that the Sewage Treatment Plan will be privately owned with no obligation on the municipality contrary to the operation and maintenance statements made previously.*

Response: The reference to residential septic systems has been removed. The statement regarding the Sewage Treatment Plant being privately owned with no obligation on the municipality is correct.

16. *Page 26 identifies the Wastewater Treatment Plant is expected to cost $1.3 million plus engineering and review fees. This statement does not include costs associated in the previous discussion regarding bonding off the project. The Planning Board should evaluate the costs identified, engineers analysis included in Appendix E identifies a force main cost of approximately $1.6 million. The cost estimate should be updated to correspond to the $2.568 million identified in the narrative report. The Planning Board requested a detailed cost estimate for each of the proposals while only a summary conclusion of the costs has been provided.*

Response: A detailed cost analysis has been prepared and is included in Appendix E of the FSEIS. The narrative has been modified to reflect the information contained in the cost analysis.

17. *Sewer response #42 regarding the design BOD of 250 Milligrams per liter identifies a website and consultation with Earthtech. The response from Earthtech should be included in the report and referenced should be included as an Appendix. Currently the residential projects in the Roseton Hills Sewer District have sample/monitoring data which identifies greater than 250 milligrams per liter influent. This data should be evaluated as a typical residential project in the Town of Newburgh in regard to design of the sanitary sewer treatment system.*

Response: Response #42 has been revised to reflect that the higher BOD/L loading is probably experienced at the other Town plants due to water saving fixtures. In certain instances in the Town, for example at the Roseton plant, there has been less than half the projected flows. Since the amount of waste being treated does not change but the volume of water is significantly lower, it is understandable that the loading rates are

higher. The plans are designed for the amount of waste and will function as intended as the volumes will be lower. For example, 300 Mg/l x 30,000 gallons will have similar loading rates as 250mg/l x 40,000 gallons.

18. *Appendix B-2 does not contain the MHE review letter.*

Response: The review letter is attached to be added to Appendix B-2.

19. *The 8 inch sanitary sewer force main appears to be very large based on an average daily flow of 37,150. Sizing of the force main should be further discussed in the document.*

Response: Until design is completed, the actual size of the forcemain is not determined and may be a 6" or 8" pipe depending on flow as well as total dynamic head; however, the Engineer's Report included in Appendix E has been modified to include a 6" pipe rather than the 8" for the forcemain.

20. *Section 4 Conclusions of the sanitary sewer report contains information regarding decentralized sewer systems. This information seems to be regarding private on-site residential systems, not a packaged plant serving 242 units. The sources identify reuse of water and other "community benefits" including green infrastructure. This discussion appears to be misplaced in the Sanitary Sewer report regarding the force main. A detailed cost estimate should be provided for the force main alternative as well as the on-site sanitary sewer treatment alternative. Planning Board and several commenters requested this financial analysis.*

Response: This discussion has been removed from the report. The report has also been modified to provide a detailed cost analysis.

Creighton Manning letter dated November 3, 2020

1. *The Site Plan references 242 proposed units. The traffic study prepared by Maser bases its analysis on 246 units so the results will be marginally conservative; however, the analysis is based on ITE data for the Peak Hour of the Generator, which could be a different time than the typical morning and afternoon peaks of Route 300. The study is conservative in that 138 trips in the AM peak hour and 165 trips in the PM peak hour were considered, where ITE's data suggests the project will generate 112 AM trips and 132 PM trips during the peak hour of adjacent street traffic.*

Response: The higher peak hour trip generation rates were used in the analysis based on requirements of the NYS DOT with the assumption that the highest generation will occur at the same time at the peak hour of the adjacent roadway system. This is a conservative approach resulting in slightly higher traffic generation for the site at surrounding intersections.

2. *CM agrees with Maser's recommendation to add signal backplates at the three signalized intersections of Route 300 (Route 32, Gardnertown Road and Route 52); however, this is subject to the capacity of the poles being available to accommodate the additional wind loads and weights.*

Response: .The capacity of the signal poles will be reviewed by NYS DOT during the Highway Work Permit process to determine if the backplates can be accommodated at these locations.

3. *CM agrees with Maser's growth factor of 1% per year to account for general background growth when forecasting 2022 traffic volumes.*

   Response: No response required.

4. *CM agrees with Maser's trip distribution anticipating that a majority of site-generated trips will be arriving from/departing to the south on NYS Route 300 because of the junction of Interstate 87, Interstate 84.*

   Response: No response required.

5. *CM concurs that the increase in delays and adjustment in signal timings will mitigate project impacts at Rt 300/32. Negligible (<1 second) to minor (< 3 seconds) changes in delay are expected at the magnet school and Plattekill Turnpike intersections.*

   Response: No response required.

6. *At the Rt 300/Gardnertown Road intersection, signal timing changes will address increases in delays; however, there will continue to be increases in demand for left turns at this intersection. Current operations indicate that southbound through traffic is delayed when a left turn vehicle is yielding to oncoming traffic, while a northbound vehicle has some shoulder to drive around the northbound left turn vehicle. A left turn lane warrant should be conducted to determine if left turn lanes are warranted.*

   Response: The Gardnertown Road intersection does not currently have a separate left turn lane. It is not anticipated that the Polo Club project will significantly increase left turn movements and the Build level of service are expected to be "B" on this approach with signal timing changes. A traffic signal modem would be supplied to NYSDOT as part of the Highway Work Permit to allow remote timing by NYSDOT. A review of the current left turn movements indicate that a separate left turn lane would be desirable at this intersection. Comment #10 has been modified to add that the applicant is proposing a fair share contribution toward any additional improvements at this intersection.

7. *At the Route 300/Route 52 intersection, an 8 second increase in overall delay is projected during the AM peak hour and a 6 second decrease in overall delay during the PM peak hour with the proposed signal timing adjustments. This intersection has long been a restriction with the heavy volumes on the Route 300 approaches, and lack of left turn lanes on the Route 52 approaches. Long queues and delays will continue at this intersection without improvements. The need for improvements at this intersection was identified as part of the Marketplace/The Loop development and the 2006 version of the Polo Club, where fair-share contributions were suggested to be applied to this intersection. There are challenges with ROW at this intersection and collaboration with NYSDOT, the applicant(s) of this and other projects, the Town and possibly adjoining land owners is likely necessary.*

Response: As noted, the intersection of Route 300/Route 52 has been identified as a capacity constrained intersection. Comment #10 has been modified to include the applicant's proposal to pay a fair share contribution towards improvements at this intersection, which would be coordinated by the Town.

8. *The site driveway is projected to operate at LOS D during the AM peak hour and LOS F during the PM peak hour, improving to LOS E with the completion of a northbound right turn lane. The egress lane of the project is about 20 feet, which will allow for two vehicles to exit, right turners having a better/lower delay than left turners. Based on the existing volumes, a traffic signal will not be warranted and stop sign control is the appropriate traffic control.*

   Response: Based on the analysis, the Levels of Service will be as stated. As noted, a traffic signal will not be warranted.

9. *Regarding the responses to the traffic comments on the FSEIS, we generally concur with the responses; however, in several responses, final determination of improvements is deferred to NYSDOT as part of the highway work permit process. We agree that NYSDOT has the final say for work in the right of way, but would request direction from the Board's attorney on what level of determination is necessary in order to complete SEQR.*

   Response: The final design of access related improvements to the State highway system will be required as part of the NYSDOT Highway Work Permit and is part of the Highway Work Permit process.

KALA letter dated October 29, 2020

1. *Trees are more diverse but the plan is still dominated by River Birch (69 proposed) and Pin Oaks (64 proposed). We suggest diversifying with 1-2 more tree species such as those listed in Cornell University's Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance. Cornell University recommends plant diversity for ecological health and to prevent mass die-off in the case of a disease.*

   Response: A revised Landscaping Plan is included in Appendix C of the FSEIS which shows thirty (30) Birches have been replaced with twenty-seven (27) Black Gum and three (3) Swamp White Oak.

2. *Pin Oaks proposed on the islands should be placed a minimum of 30' on center along the boulevard rather than the sparse 60' on center as proposed. In constrained places, trees do not tend to grow to full size, so more trees planted closer together will help ensure shaded streets and a pleasing aesthetic.*

   Response: The scale on the previous landscape plan and drawings was incorrect. The scale of the drawings is 1" =20', not 1" = 30' as the drawings indicated. This error has been corrected on the revised Landscaping Plan included in Appendix C.

3. *Sweetgums do not do well in this area and people tend to dislike the spiky fruits, therefore another plant should be used. Please consider a disease resistant variety of American Elm, such as 'Princeton' or another Cornell Recommended Tree in place of the Round Lobed Sweetgum. The American Elm is a species that has been proven*

tolerant of the conditions proposed and referenced in Cornell University's Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance. Please choose a columnar tree hardier to the area in the place of the Columnar Sweetgum.

Response: A revised Landscaping Plan is included in Appendix C of the FSEIS that shows Round Lobed Sweetgum has been changed to American Hophorbeam and the columnar Sweetgum with Princeton Sentry Ginko. Additionally the twenty-two (22) Pin Oaks were changed to American Elm.

4. *Street trees proposed along Route 300 are planted 60' on center and not 40' as specified in original comments 20 and 22. This is fine due to the extensive proposed screening in the background.*

   Response: The scale on the previous landscape plan and drawings was incorrect. The scale of the drawings is 1" =20', not 1" = 30' as the drawings indicated. Accordingly, the Pin Oaks are drawn at forty (40) feet on center.

5. *From past inspection experience, plantings tend not to do well in the recessed entrance areas of the buildings. Astilbe is finicky and all that were planted at a previous inspection died. Please consider choosing a tougher plant.*

   Response: A revised Landscaping Plan is included in Appendix C of the FSEIS which shows the Astilbe shall be replaced with Chantilly Lace Goats Beard.

6. *Please show thick, layered plantings so that the planting is lush and full. In front of Building 9, few plants are shown or large plants are shown without anything close to or under them. For example, two Leatherleaf Viburnums are shown without shrubs or groundcovers nearby. Pack these areas with groundcovers, similar to the planting proposed in the median. Add smaller shrubs closer to the Viburnums. This will help soften and create an aesthetically pleasing landscape along the façade.*

   Response: A revised Landscaping Plan is included in Appendix C of the FSEIS that shows a similar planting treatment to that associated with Building #18 has been added to the plan set.

7. *There are large gaps in screening of commercial uses on the north property line between buildings 10 and 11, and 11 and 21 per original comment 23. The consultant should add vegetation to provide immediate screening. Additional vegetation could include thick growing large shrubs, pioneer species of trees that grow quickly and die when shaded, additional evergreen trees, etc. A thick, dense, layered screen planting should be proposed.*

   Response: A revised Landscaping Plan is included in Appendix C of the FSEIS that shows additional screening has been added adjacent to the industrial area to the north behind Buildings #10 and #11.

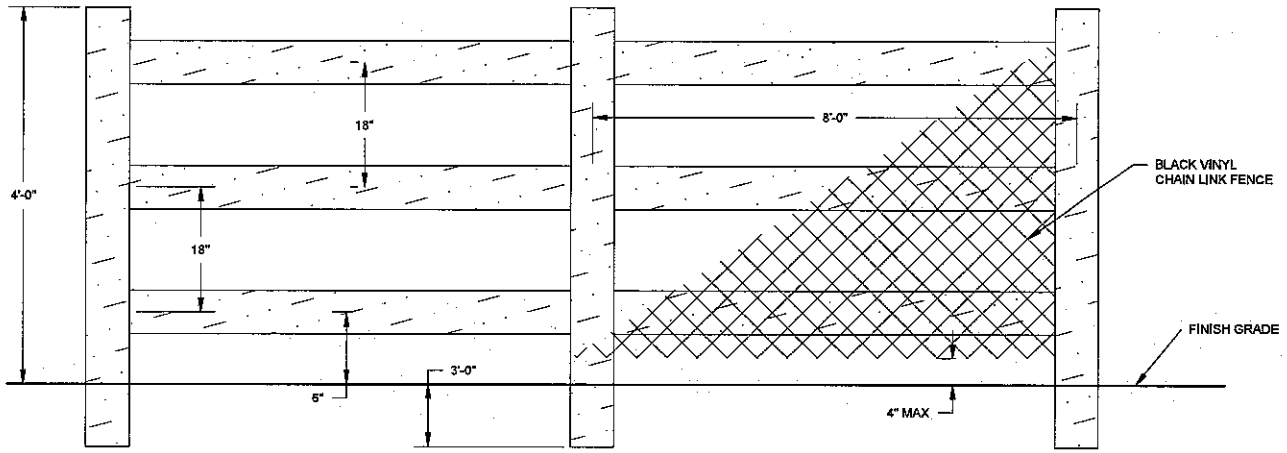
8. *Please adjust plant label size as it is difficult to read. The size of the plant is not necessary on plant labels, just the plant list.*

Response: Making this change is not easily accomplished as increasing the label size would eliminate the space for labeling and the labeling would likely become more confusing.

If you need any additional information, please do not hesitate to contact this office.

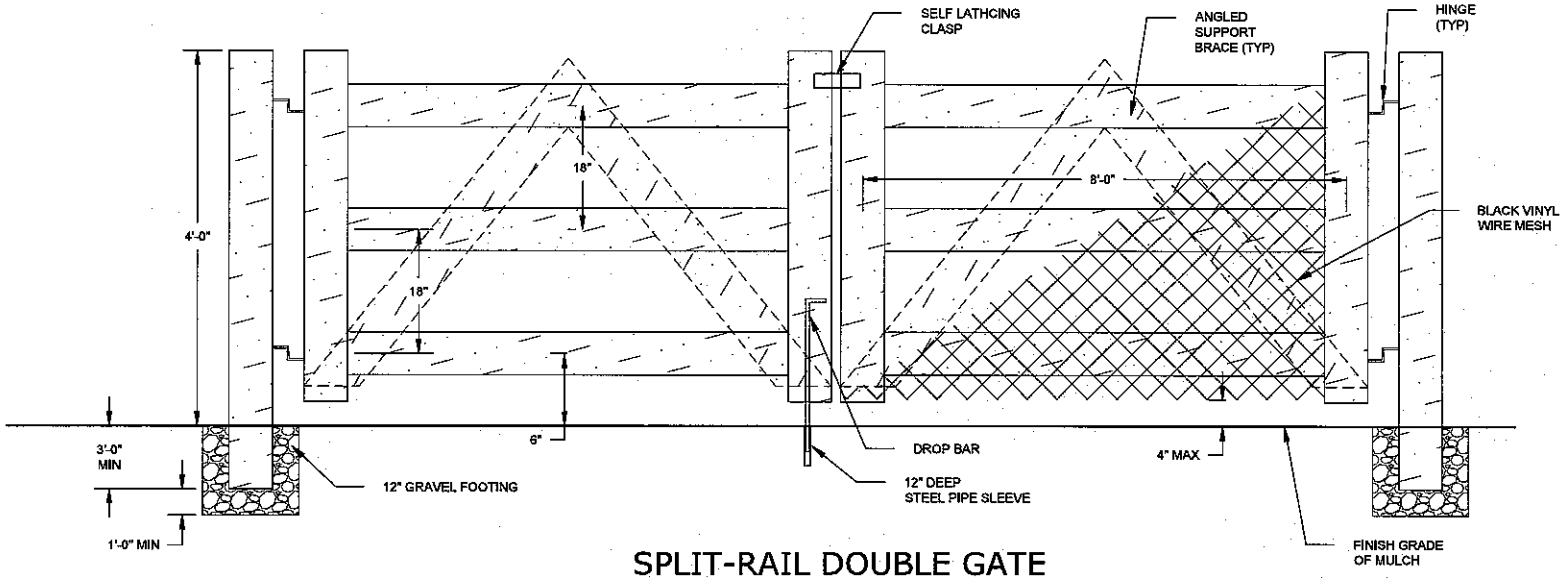
Sincerely,
Engineering & Surveying Properties, PC

Ross Winglovitz, P.E.
Principal



SPLIT-RAIL FENCE

SCALE: NTS



SPLIT-RAIL DOUBLE GATE

SCALE: NTS

SPLIT RAIL FENCE & GATE	THE POLO CLUB NYS ROUTE 300 TOWN OF NEWBURGH ORANGE COUNTY, NEW YORK	DATE: 12/3/2020	JOB # 114.01	ENGINEERING & SURVEYING PROPERTIES Achieving Successful Results with Innovative Designs
		SCALE: AS NOTED	SHEET # D-1	MONTGOMERY OFFICE 71 CLINTON STREET MONTGOMERY, NY 12549 Ph: (845) 457-7727 WWW.EP-PC.COM

The Polo Club

Final Supplemental Environmental Impact Statement (FSEIS)

Town of Newburgh

Orange County, New York

Lead Agency:
Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, NY 12550

Contact Person:
John Ewasutyn – Planning Board Chairman
(845) 564-7804

Project Consultant and Contact Person:
Ross Winglovitz, P.E.
Engineering Properties, PC
71 Clinton Street
Montgomery, New York 12549
(845) 457-7727

Date of Submission: October 15, 2020 Revised: December 7, 2020

Date of Acceptance:

PROJECT CONSULTANTS

Engineer:	Ross Winglovitz, P.E. Engineering Properties, PC 71 Clinton Street Montgomery, NY
Traffic Engineer:	Phil Grealy, PhD., P.E. Maser Consulting P.A. 400 Columbus Avenue Suite 180E Valhalla, NY 10595
Legal:	Jayne Weinberg, Esq. Daly & Weinberg, PLLC 56 Far Horizons Drive Newburgh, NY 12550
Environmental Consultant:	Peter Torgersen Environmental Sciences 110 Town Line Road Pearl River, NY 10965
Landscape Architect:	Chad Wade, R.L.A. Landarch Studios, PLLC 363 N. Montgomery Street Newburgh, NY 12550
Geotechnical Consultant:	Geotechnical Consultant 24 Worlds Fair Drive, Suite B Somerset, NJ 08873
Sanitary Sewer Consultant:	Berger Engineering and Surveying PLLC 100 Fulton Avenue Poughkeepsie, NY 12603

Table of Contents

1.0 Introduction ..... 4~~5~~
2.0 Project Summary ..... 5~~6~~
2.1 Project History ..... 5~~6~~
2.2 Proposed Action ..... 6~~7~~
3.0 Public Comment and Responses ..... 8~~9~~
3.1 General Comments ..... 9~~10~~
3.2 Landscaping Plan ..... 9~~10~~
3.3 Surface Water ..... 15~~16~~
3.4 Transportation and Traffic ..... 17~~18~~
3.5 Utilities ..... 20~~20~~

Appendices:

Appendix A:

- Public Hearing Transcript, August 6, 2020
- Public Hearing Transcript, August 20, 2020

Appendix B:

- Karen Arent, Landscape Architect, Planning Board Consultant's Review Letter dated June 11, 2020
- Pat Hines, Engineer, Planning Board Consultant's Review Letter dated September 11, 2020

Appendix C:

- Landscaping Plans PP-1 to PP-10, last revised September 29, 2020

Appendix D:

- Stormwater Pollution Prevention Plan narrative, dated May 2020, last revised September 2020

Appendix E:

- Preliminary Discharge Effluent Limits from NYSDEC Water Quality Engineer, Aparna Roy, via email on April 1, 2020
- Engineer's Report for a Cost Analysis of the Private Sewer Treatment Plant and Private Sanitary Forcemain Alternative to Serve the Polo Club, dated October 12, 2020, revised November 27, 2020.

Appendix F:

- Letter regarding Traffic Signal Timings NYS Route 300 & NYS Route 32 – Signal No. O-34 from NYSDOT dated December 5, 2019

Appendix G:

- ISO Hydrant Flow Data Summary dated August 12, 2010
- Hydrant Flow Testing Results dated November 13, 2020

1.0 Introduction

This Final Supplemental Environmental Impact Statement (FSEIS) has been prepared in accordance with the requirements of the New York State Environmental Conservation Law, Article 8, Section 8-0109, State Environmental Quality Review (SEQR) Act and Title 6, Part 617 of the New York Code Rules and Regulations pertaining thereto. It examines the impacts associated with the development of a 242-unit multifamily apartment complex, with 27 of the units being designated for seniors.

The purpose of this FSEIS is to respond to comments made, both orally and in writing, on the Supplemental Draft Environmental Impact Statement (SDEIS) during the public hearing and comment period. Commentators included the public, the Planning Board members and their consultants. This FSEIS incorporates by reference all information contained in the SDEIS, unless specifically amended, revised and/or replaced. The SDEIS and appendices are available on the Town of Newburgh and Engineering and Surveying Properties' websites.

Following circulation of this FSEIS and publication of the Notice of Completion in the Environmental Notice Bulletin (ENB), a Findings Statement can be adopted and the SEQRA process concluded. The Findings Statement considers the relevant environmental impacts presented in the SDEIS and FSEIS and certifies that the requirements of SEQRA have been met. Once the Findings Statement has been adopted, the Town Board can take action on the proposed applications.

This FSEIS is organized under the following section headings:

- **Section 1.0, Project Summary,** provides information on the history of the project and proposed site plan; and
- **Section 2.0, Public Comments and Responses,** is a comprehensive compilation of all comments received during the public hearing and comment period along with the applicant's responses thereto.

2.0 Project Summary

The Polo Club is a proposed residential development on two parcels of land (Section 39, Block 1, Lots 1 and 2.12), in the Town of Newburgh, Orange County, New York, totaling 36.23 acres. Upon approval of the project, the two tax lots will be combined into a single tax lot. As proposed, the Polo Club will contain 242 garden apartments and a recreational complex. The property is currently vacant and all structures previously existing on the site, including three storage sheds, a storage garage and an abandoned house, have been removed.

2.1 Project History

On or about February 6, 2006 the project sponsor, Spruce Creek, LLC, filed an application for site plan approval with the Town of Newburgh Planning Board requesting permission to build 126 townhomes. On May 18, 2006, the Planning Board declared its intent to become Lead Agency, under the New York State Environmental Quality Review Act ("SEQR") and issued a Positive Declaration on July 6, 2006. Draft and Final Environmental Impact Statements were prepared between February 2006 and August 2008. Preliminary approval was granted on September 4, 2008. The plan was amended in 2009 to include a total of 138 three-bedroom townhouses in 26 buildings. An amended findings statement was adopted on September 1, 2011 and the project was approved for 138 townhouses in 26 buildings.

The applicant is currently before the Board seeking to amend the site plan to a garden apartment complex that includes 242 rental units in 21 buildings, a clubhouse and recreation area. Of the 242 apartments, 215 will be available for rent to the general public and 27 will be restricted for use by senior citizens. A "senior citizen" is defined by Town of Newburgh Town Code, Sec. 185-48C as persons over the age of 55 years. On May 6, 2019, on referral from the Planning Board, the applicant submitted a letter to the Town Board seeking a density bonus to include senior units within the Polo Club project as permitted by the Town Code in the R-3 District. On June 24, 2019, the Town Board voted to send a letter to the Planning Board instructing them to move forward with the review of the Polo Club project with the senior units included. On December 20, 2019, the Planning Board re-circulated its intent for designation of Lead Agency, issued a

Positive Declaration and classified the project as a Type 1 Action. The applicants were directed to prepare a Supplemental Draft Environmental Impact Statement ("SDEIS").

After review and revision, the SDEIS was deemed complete by the Planning Board on June 18, 2020. The SDEIS was then distributed to all interested and involved agencies, and copies were placed at the Town of Newburgh Town Hall and the Newburgh Free Library for the public's review. Electronic copies of the documents were made available online at www.townofnewburgh.org and www.engineeringpropertiespc.com .

On August 6, 2020, in accordance with the Governor's Executive Orders issued in response to the COVID-19 pandemic, the Planning Board held a public hearing via Zoom during which the public was given an opportunity to ask questions and provide comment on the site plan and the SDEIS. At the conclusion of the public hearing, it was determined that given recent power outages from a tropical storm, the public hearing was to be held open until the August 20, 2020 Planning Board meeting. At the August 20th meeting, the public was given an additional opportunity to ask questions and provide comment on the site plan and the SDEIS. At the conclusion of that meeting, the public hearing was closed but the comment period remained open until 10 days after the posting of the minutes for both public hearings. At its September 17, 2020 meeting, the Planning Board voted to close the public comment period and directed the Applicant to prepare this FSEIS.

This FSEIS responds to comments made at both public hearings and submitted in writing through September 17, 2020. The transcripts for both public hearings are included in Appendix A of this FSEIS. The written comments received are included in Appendix B.

2.2 *Proposed Action*

As provided above, the proposed project is located in the Town of Newburgh, Orange County, NY. Specifically, the site is located north of Gardnertown Farms Road and south of Jeanne Drive on the east side of Route 300. The project is located in the Town's R-3 zoning district, which permits six units per acre. The project is seeking a

senior density bonus, which allows up to nine units per usable acre. A minimum of one-third of the additional units must be designated for senior housing.

The applicant is proposing to develop 242 garden apartments, of which 215 will be available to the general public and 27 will be restricted to senior citizens. The project will be serviced by municipal water. The applicant studied two alternatives for sanitary sewer treatment, an on-site private sewage treatment plant and a sanitary forcemain to be located in the NYS Route 300 right of way which would convey effluent to the existing Town of Newburgh collection system.

Access to the site will be provided via a boulevard entrance from NYS Route 300. An emergency access drive will be provided to/from Route 300 near the southern property line. The emergency access road will be paved and an access control keyed lock will be installed to prevent regular use. There will be one primary internal loop road providing circulation through the project site. Pedestrian access through the site will be provided via 5-foot sidewalks.

The garden apartment complex will be owned by a single entity that will be responsible for all maintenance on site. As shown on the site plan, there are three construction phases, and it is anticipated that construction will take between one and two years. Depending on market demand, weather conditions and completion of the required infrastructure, the phasing and/or timing of the construction may vary.

3.0 Public Comment and Responses

This section provides a comprehensive list of all questions and comments received during the public review process, whether made orally at the Public Hearings held on August 6th and 20th, 2020 or submitted in writing, as well as responses to same.

The Planning Board received both oral and written comments during the public hearings on the Polo Club SDEIS. Oral comments appear as part of the official transcript of the public hearings held on August 6, 2020 and August 20, 2020 and are included in Appendix A of this FSEIS.

One letter, a technical review letter, dated September 11, 2020, from the Planning Board's engineer, McGoey, Hauser and Edsall was received by during the public comment period, which remained open until September 17, 2020. Prior to the public hearings, a technical review letter dated June 11, 2020 had been submitted by the Town's landscape consultant, Karen Ardent, the responses to which are addressed in the FSEIS. Copies of these review letters are included in Appendix B of this FSEIS.

To facilitate the readers' understanding of where specific comments are addressed, handwritten notations have been added to the original source documents in Appendices A and B, cross referencing the original comment with the corresponding comment and response number in the FSEIS. The public comments are numbered in the order in which they were received, beginning with comments made at the August 6th public hearing and followed by comments made at the August 20th public hearing. The Planning Board's consultants review comments follow the public comments.

Comments have been grouped by topic and are organized and referenced by the relevant section number in the SDEIS. Where appropriate, some of the comments are summarized or paraphrased. When comments were repeated, all commentators are referenced.

The list below constitutes the complete list of all comments received by the Planning Board during the public comment periods:

Public Hearing Transcripts:

- Public Hearing Transcript August 6, 2020.
- Public Hearing Transcript August 20, 2020.

Written Comments from the Town of Newburgh Planning Board's Consultants:

- Letter from Karen Arent, KALA, Landscape Architect, Planning Board's Landscape Consultant, dated June 11, 2020
- Letter from Patrick Hines, McGoey, Hauser and Edsall Consulting Engineers, PC, Planning Board's Engineers, dated September 11, 2020.

3.1 General Comments

Comment #3, Public Hearing Comment, August 6, 2020, Bill Denker, Gardnertown Farm, Newburgh. We've owned Gardnertown Farms and Polo Club for 30 years and I am concerned with the name they are using.

Response #3: The applicant has referred to this project as the "Polo Club" since its inception and believes it would cause confusion if the applicant were to change the name of the project at this time. However, as a proposed mitigation measure, if the site plan application is approved by the Planning Board, the applicant will commit to the project not being named or marketed as the Polo Club during and/or post construction.

Comment #4: Public Hearing Comment, August 6, 2020, Bill Denker, Gardnertown Farm, Newburgh. Being so close to us, we deal with horses daily and there are smells and dust and we have horse shows and PA systems. I don't want someone to come up four years from now and say you can no longer do that for this reason.

Response #4: As Gardnertown Farms is part of Orange County ~~an~~ Agricultural District #1, Mr. Denker's right to farm is protected by New York State law, (NYS Agric. & Mkts Sec. 300, *et. seq.*), which protects farmers operating in agricultural districts from private nuisance claims. In addition, as a proposed mitigation measure, all prospective tenants for apartments will be advised of the adjacent agricultural use and all leases will contain such notification.

3.2 Landscaping Plan

NOTE: The Landscaping Planting Plan has been revised based on the following comments/responses and is included as Appendix C.

Comment #15: ***Karen Arent letter dated June 11, 2020.*** Sixty-three Pin Oaks are specified. No other hardwood species or large growing shade trees are specified. There should be diversity for both ecological and longevity concerns. Trees should be native and hardy.

Response #15: A variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance have been supplemented into the Planting Plan to provide ecological diversity ensure longevity.

Comment #16: ***Karen Arent letter dated June 11, 2020.*** Wherever there is less than 40' of existing wood area to remain along Route 300, dense screening should be proposed.

Response #16: The proposed landscaping along Route 300 has been updated to include supplemental plantings which include a variety of shrub species to provide understory and more immediate screening while the larger evergreen and deciduous trees mature and provide more substantial screening.

Comment #17: ***Karen Arent letter dated June 11, 2020.*** A staggered single row of White Pines are shown spaced over 20' apart and Red Cedar Junipers are spaced approximately 10' apart. It will take quite a long time before screening is achieved. The consultant should add vegetation to provide more immediate screening. Additional vegetation could include thick growing large shrubs, pioneer species of trees that grow quickly and die when shaded, additional evergreen trees, etc. A thick, dense, layered screen planting should be proposed.

Response #17: The areas meant to provide screening have been updated to include supplemental plantings which include a variety of species to provide immediate screening while the larger evergreen and deciduous trees mature and provide more substantial screening.

Comment #18: ***Karen Arent letter dated June 11, 2020.*** Additional large growing deciduous trees should be proposed to shade parking areas. At least one tree per every 10 spaces must be proposed.

Response #18: Smaller trees have been maintained in locations where larger street trees will interfere with the proposed lighting. In locations that light fixtures are not proposed a variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's *Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance* have been proposed.

Comment #19: ***Karen Arent letter dated June 11, 2020.*** Show large shade trees between parking aisles instead of Dogwoods.

Response #19: Smaller trees have been maintained in locations where larger street trees will interfere with the proposed lighting. In locations that light fixtures are not proposed the previously proposed Dogwoods have been replaced with a variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's *Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance.*

Comment #20: ***Karen Arent letter dated June 11, 2020.*** Many small trees are shown along edges of the road. It would be great to see larger growing street trees and more street trees. On subdivisions, street trees must be shown every 40' to help soften the streetscape and provide environmental and ecological benefits. This development should follow a similar large tree placement.

Response #20: Smaller trees have been maintained in locations where larger street trees will interfere with the proposed lighting. In locations that light fixtures are not proposed a variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's *Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance* have been proposed.

Comment #21: ***Karen Arent letter dated June 11, 2020.*** Dogwoods are shown 20' to 25' from the façade of the building. It would be great to see two larger growing trees or if small trees are desired, a robust, hardy trio of trees would make more of an immediate impact than just two small trees. It would be great to use large growing trees to grow over and shade asphalt areas to reduce the heat of this heavily paved and roofed landscape.

Response #21: Smaller trees have been maintained in locations where larger street trees will interfere with the proposed lighting. In locations that light fixtures are not proposed a variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's *Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance* have been proposed.

Comment #22: ***Karen Arent letter dated June 11, 2020.*** In addition to screening along Route 300, street trees should be proposed at least every 40'. If space doesn't allow for street trees and screen planting, show smaller deciduous trees. Approximately one street tree for every 40 linear feet of road should be proposed.

Response #22: Street trees have been added along Route 300 at the recommended spacing. Based upon the limits of disturbance, existing trees will remain along much of Route 300.

Comment #23: ***Karen Arent letter dated June 11, 2020.*** Provide some screen planting between the commercial uses on the north property line.

Response #23: Screening along the businesses adjacent to the northern property line has been proposed to the greatest extent practicable based upon the Civil Drawings. The areas meant to provide screening have been updated to include supplemental plantings which include a variety of species to provide immediate screening while the larger evergreen and deciduous trees mature and provide more substantial screening.

Comment #24: ***Karen Arent letter dated June 11, 2020.*** A planting area of only 2 – 3' is shown in front of gravel along large sections of the facades of the buildings. In my opinion, a thicker planting area should be shown to allow softening of the buildings.

Response #24: The eighteen (18) inch gravel treatment proposed along the foundation is highly recommended to prevent the plants from being planted too close to the building foundation. It also provides a number of beneficial aspects for the maintenance of the building. Plantings have been proposed to fit the area based upon the Civil Drawings. Additionally, there are proposed windows that prevent the installation of larger shrubs.

Comment #25: ***Karen Arent letter dated June 11, 2020.*** Please show thick, layered plantings in front of the buildings so that the planting is lush and full. In some locations, few plants are shown or large plants are shown without anything close to or under them. For example, two Leatherleaf Viburnums are shown without shrubs or groundcovers nearby. Pack these areas with groundcovers, similar to the planting proposed in the median. Add smaller shrubs closer to the Viburnums. This will help soften and create an aesthetically pleasing landscape along the façade.

Response #25: Additional low growing plantings have been proposed in addition to the previously proposed large shrub plantings in order to provide a more lush and full planting plan.

Comment #26: ***Karen Arent letter dated June 11, 2020.*** At the end of buildings and between sidewalks near the entrances to buildings, there are no plants and just black areas. Please show planting in all spaces where pavement or buildings are not proposed.

Response #26: Acknowledged, the Planting Plan has been updated accordingly.

Comment #27: ***Karen Arent letter dated June 11, 2020.*** Dogwoods are shown in wide parking islands between garages. Dogwoods are not particularly hardy in this area and

even the disease resistant varieties suffer from anthracnose. Please choose a tougher, more urban tolerant tree for these locations.

Response #27: The previously proposed Dogwoods have been replaced with a variety of species that have been proven tolerant of the conditions proposed and referenced in Cornell University's *Recommended Urban Trees: Site Assessment and Tree Selection for Stress Tolerance.*

Comment #28: ***Karen Arent letter dated June 11, 2020.*** Mugo Pines suffer from a particular caterpillar and must be sprayed to remain robust and healthy. Please consider a shrub that requires less maintenance.

Response #28: Mugo Pines have been removed for the proposed planting plan and replaced with a different evergreen shrub.

Comment #29: ***Karen Arent letter dated June 11, 2020.*** Please consider planting along the rear façade to help provide the feeling of privacy between units.

Response #29: Personal experience has proved that access to the rear patio space for each unit from outside is desirable for many of the future tenants. Those units that directly adjoin a parking area have been updated with supplemental planting.

Comment #30: ***Karen Arent letter dated June 11, 2020.*** Trees should be shown between the buildings and the stormwater management areas to help the site blend better with the existing natural environment, to provide wildlife habitat, shade buildings, replace some of the many trees that will be removed, etc. The whole site need more large growing trees, whether along the roads, parking areas, between and behind buildings, etc.

Response #30: Trees have been added to the Planting Plan in accordance with the recommendation.

Comment #31: ***Karen Arent letter dated June 11, 2020.*** The symbol SyrKim (likely Miss Kim Lilac) is shown on the plan but is not on the plant list.

Response #31: The Plant Schedule has been updated to include all the species proposed throughout the Planting Plan.

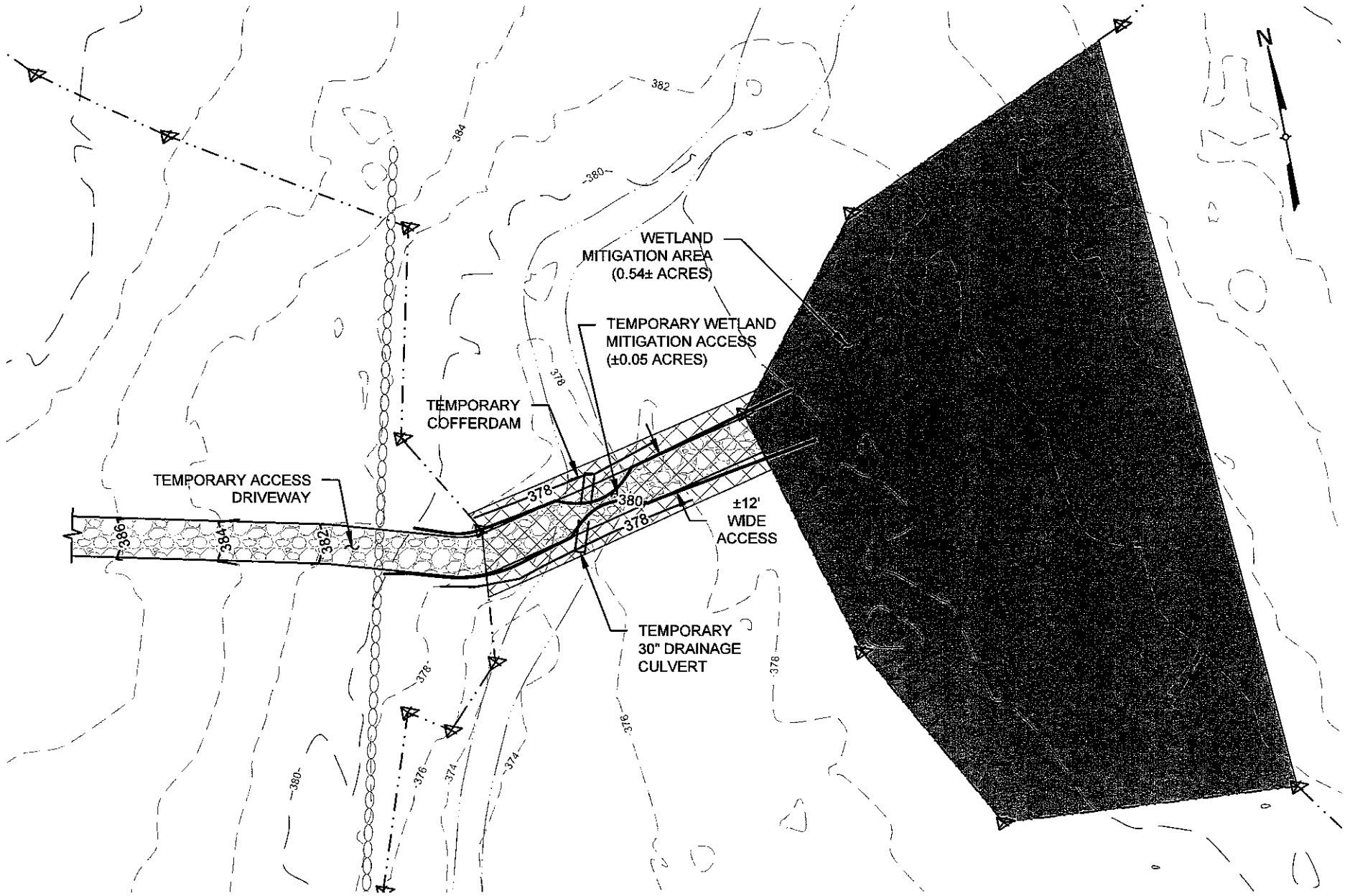
3.3 Surface Water

Comment #6: ***Public Hearing Comment, August 6, 2020, John Corbett, 9 Gargoyle Lane.*** NYS Route 300 is set up so all the water flow that comes down comes to the Gargoyle side from Jeanne Drive on down. Are they going to do anything to fix that problem?

Response #6: The stormwater from the site flows east away from NYS Route 300 and will have no impact on the street right-of-way or downstream properties.

Comment #34: ***Pat Hines letter dated September 11, 2020.*** In response to previous comments, the Applicant has identified that access to the wetland mitigation construction area would be from adjoining properties. Information pertaining to this access and any impacts regarding this should be further identified. Information pertaining to how the project will be constructed if access from adjoining properties cannot be gained should be further clarified.

Response #34: The Applicant met recently with a representative of WPA Acquisition Corp. ("WPA") which owns the parcels east of the Polo Club property, Town of Newburgh SBL 34-2-101 and 102. WPA's President, Paul Gekakis, has agreed to allow access across his company's adjoining properties in order for the Applicant and/or his assigns to construct wetlands mitigation on the east end of the Polo Club property. The applicant is currently working with WPA and its attorney to obtain a written access agreement, an executed copy of which will be provided to the Board upon its completion. There are no anticipated environmental impacts associated with the crossing of WPA's properties in order to access the proposed wetlands mitigation area. Although the



WETLAND MITIGATION ALTERNATIVE ACCESS	THE POLO CLUB NYS ROUTE 300 TOWN OF NEWBURGH ORANGE COUNTY, NEW YORK	DATE: 12/07/2020 SCALE: 1" = 40'	JOB # 114.01 SHEET # WET-1	ENGINEERING & SURVEYING PROPERTIES Achieving Successful Results with Innovative Designs

MONTGOMERY OFFICE
71 CLINTON STREET
MONTGOMERY, NY 12549
Ph: (845) 457-7727
WWW.EP-PC.COM

Drawing Name: Z:\114.01 - The Polo Club (Muthig)\Site Plan.dwg Date Printed: Dec 07, 2020, 12:19pm

applicant believes that an access agreement will be forthcoming, in the event that it is unable to secure such agreement, it will apply to the ACOE for a 0.05 acre temporary 12-foot-wide crossing to construct the mitigation area as depicted in Figure WET-1.

Comment #35: ***Pat Hines letter dated September 11, 2020.*** Status of the SDEIS has been updated to include information from the NYS Office of Parks, Recreation and Historic Preservation including a 29 May 2020 No Impact Letter, which has been incorporated into the SWPPP as an attachment.

Response #35: Comment noted. No response required.

Comment #36: ***Pat Hines letter dated September 11, 2020.*** A map should be provided in the SWPPP identifying the location of all permeability and deep test holes. A discussion should be incorporated into the plan identifying depths of test holes in relationship to final grading of the infiltration basins.

Response #36: An additional figure (F-5 Infiltration Testing Locations) has been included in the revised SWPPP. The SWPPP narrative has been revised to discuss the infiltration testing as well as the relationship of groundwater encountered in the excavated testpits to the final finish grade of the infiltration basin. The revised SWPPP narrative is included as Appendix D.

Comment #37: ***Pat Hines letter dated September 11, 2020.*** The SWPPP narrative identifies a 5 inch per hour rate. The model of the infiltration basin identifies 14.5 inches per hour. The text in the report identifies greater than 5 inches per hour. The model and report should be checked with the soil testing which has been performed.

Response #37: The SWPPP narrative has been updated to discuss the actual infiltration testing results and clarifies that the infiltration rate utilized in the model is the average of the rates observed during the specific onsite testing.

Comment #38: ***Pat Hines letter dated September 11, 2020.*** Plans and SWPPP should identify whether safety fencing will be provided for all Stormwater Management Facilities which contain standing water during any portion of the model storm events.

Response #38: The applicant will provide safety ~~re is no~~ fencing consisting of a wooden split rail fence with attached black welded wire mesh ~~proposed~~ around the stormwater facilities. A figure entitled "Split Rail Fence & Gate" detailing the proposed fencing will be added to the full plan set.

3.4 Transportation and Traffic

Comment #5: ***Public Hearing Comment, August 6, 2020, Yvonne Philips, 1593 Route 300.*** I am concerned about the traffic that will be coming into the area.

Response #5: As shown on Table No.1 of the Traffic Impact Study, the project is expected to generate approximately 39 entering and 99 exiting vehicles during the peak AM one-hour period and 97 entering and 68 exiting vehicles during the peak PM one-hour period. The report Figures No. 10 and 11 indicate the distribution of those trips onto the Route 300 corridor. Access related improvements will be subject to the Highway Work Permit (HWP) from the New York State Department of Transportation (NYSDOT) such as a right turn lane northbound on Route 300. Other improvements, for example traffic signal upgrades including possible communication modems, actuation, and timing improvements at adjacent intersections such as Route 300 and Gardnertown Road and Route 300 and Route 32, will be addressed in the HWP.

Comment #7: ***Public Hearing Comment, August 6, 2020, John Corbett, 9 Gargoyle Lane.*** Is there going to be an entrance lane put in on the northside so that it doesn't impact traffic?

Response #7: The site will be constructed to consist of one entering and one exiting lane. On Route 300 there will not be an acceleration lane since this is not permitted by NYSDOT. Shoulder widening and replacement, as well as the construction of a

northbound right turn lane, will be constructed as part of the entrance construction. Any other improvements will be determined under the NYSDOT Highway Work Permit process.

Comment #8: ***Public Hearing Comment, August 6, 2020, John Corbett, 9 Gargoyle Lane.*** Have they done a traffic study lately?

Response #8: An updated traffic study for the current development was completed in December 2019. This study included new traffic counts, updated traffic data from NYSDOT, and was reviewed by the Town's consultant. The study included an evaluation of background traffic growth as well as traffic from other pending projects in the Town as well as the traffic from the proposed residential development.

Comment #9: ***Public Hearing Comment, August 6, 2020, John Corbett, 9 Gargoyle Lane.*** Are they going to put a traffic light at Jeanne Drive or what are they going to do so that we are able, as residents, to get in and out of our driveways?

Response #9: There is currently no proposal to install a traffic signal at Jeanne Drive. The final determination on offsite improvements will be determined by NYSDOT as part of the NYSDOT Highway Work Permit.

Comment #10: ***Public Hearing Comment, August 6, 2020, Stephanie DeLuca, Planning Board Member.*** I am concerned about the capacity on Route 300 being rather large.

Response #10: The Route 300 corridor currently along the site frontage has in excess of 900 to 1,200 vehicles per hour during the AM and PM peak one-hour periods, respectively. The project will be adding between 138 and 165 vehicles in these periods. Access related improvements will be completed including a right turn lane to minimize impact on through traffic on the corridor. As summarized in Table No. 2, certain intersections such as Route 32 and 300 and Route 300 and Gardnertown Road were found

to experience some drops in Levels of Service as a result of background traffic increases and/or increases in traffic from the Polo Club development. The applicant is proposing mitigation to reduce delays including ~~Certain~~ traffic signal upgrades including signal timing modifications, provision of communication modems to allow remote access and adjustments which measures are subject to approval by NYDSOT. ~~have been identified and will be completed as directed by NYSDOT as part of~~ during the Highway Work Permit process.~~–~~ It is important to ~~N~~note that the intersection of Route 52 and Route 300 has been previously identified in other studies to experience long delays during the PM peak hour. The traffic from the Polo Club is not expected to significantly change the conditions, however, the applicant is proposing the ~~this location is also a likely candidate for the~~ installation of a communications modem at this intersection, subject to NYSDOT review and approval. ~~and the need will be addressed as part of the NYSDOT Highway Work Permit process.~~ In addition, the applicant is proposing to pay a fair-share contribution towards upgrades at this intersection, which would be coordinated by the Town. In addition to proposing a traffic signal modem at the Gardnertown Road intersection with Route 300, a review of the current left turn movements indicate that a separate left turn lane would be desirable at this intersection and the applicant is proposing to pay a fair-share contribution toward any additional improvements at this location, which would be coordinated by the Town.

Comment #11: ***Public Hearing Comment, August 6, 2020, Ken Mennerich, Planning Board Member.*** The summary statement indicates that there's no difference between the build and no build scenarios. The only thing that is being proposed is some traffic modifications on 300, 32 and 300, Route 300 and Gardnertown Road and the Route 300 and Rout 52 intersections and that was to reduce wait times. I would like to see more detail on that because it is not intuitive for someone that lives in the area and travels these roads.

Response #11: See Response 10.

3.5 Utilities

Water Supply:

Comment #39: ***Pat Hines letter dated September 11, 2020.*** The flow characteristic data in the Potable Water report identifies testing performed 6 July 1996. It is requested the Applicants evaluate this testing in coordination with the Water Department to confirm that the flows and pressures utilized in their report are still valid based on bringing the Delaware Aqueduct Plant online since 1996.

Response #39: Based on a field test performed by the Town's water department at a hydrant on Jeanne Drive just east of NYS Route 300 on August 12, 2010 the normal operating static pressure at the hydrant was 48 psi with a residual pressure of 42 psi at a flow of 1,280 gpm. According to John Egitto, operator of the Town of Newburgh's Water Treatment Plants, during a phone call on October 9, 2020, the hydraulic pressures in the water system were not affected when the Delaware Aqueduct Plant came online in 2013. Additional hydrant flow testing was conducted by Engineering & Surveying Properties at the hydrant located at the intersection of Jeanne Drive and NYS Route 300 on November 13, 2020. The new flow and pressure results were slightly lower but similar in magnitude to the 2010 ISO results and are not expected to significantly alter the expected pressure and flow in the Polo Club development. Both the 2010 and 2020 results have been added to the FSEIS as Appendix G. Revised WaterCAD calculations will be prepared using the 2020 results prior to submission to the OCHD for water main extension approval.

Sanitary Sewer

Comment #32: ***Pat Hines letter dated September 11, 2020.*** The Applicant's representatives are requested to further evaluate the sanitary sewer treatment and discharge proposed. A further discussion on the discharge limits should be provided to clarify the intermittent steam standard design parameters. Information pertaining to average daily stream flow should be incorporated into the report. Information regarding the NYSDEC stream stats can be utilized.

Response #32: An Intermittent Stream is defined by the NYSDEC, as

1. Any stream that periodically goes dry at any point downstream of the proposed point of discharge, or
2. Any stream segment below the proposed point of discharge in which the minimum average 7-day, 10-year discharge (MA7CD10) stream flow is less than 0.1 cubic feet per second as estimated by methods other than continuous daily flow measurements.

New York State Design Standards for Intermediate Sized Wastewater Treatment System, March 5, 2014, Section B.6.d Treatment Considerations and Effluent Limits, p. B-23 ("NYS Design Standards")

Furthermore, "discharge to an intermittent stream typically requires more stringent effluent limitations." NYS Design Standards, p. B-23.

The Preliminary Discharge Effluent Limits for the proposed sewage treatment plant at Polo Club were provided by a NYSDEC Water Quality Engineer, Aparna Roy, via email on April 1, 2020 (attached as Appendix E) and are designed specifically for an intermittent stream, which is the NYC DEC categorization of the proposed discharge point, an unnamed stream located in the eastern portion of the project site. The Preliminary Discharge Effluent Limits as follows:

Parameter	Discharge Limit (per liter of effluent discharged)
BOD	5 mg/L, daily max
Dissolved Oxygen	7 mg/L, daily mx
Suspended Solids	10 mg/L, daily max
Settleable solids	0.1 ml/L, daily max
Ammonia as NH3	1.48 mg/L summer, 2.18 mg/L winter*, daily max or average
Chlorine Residual	0.03 mg/L, daily max
pH	6. 5– 8.5, range
Coliform	200/400 per 100 ml, 7 consecutive day geometric mean (with disinfecting/without disinfecting)

**The Ammonia limits specified above are slightly lower than those included in Table B-4B Typical Effluent Limits for Intermittent Streams, page B-23, NYS Design Standards.*

In accordance with *NYS Design Standards*, an applicant seeking to discharge effluent from an onsite sewage treatment plant into an intermittent stream will only be issued a SPDES permit if it can be established that the treatment system as designed is capable of meeting the proposed effluent limitations. The sewage treatment plant proposed for the Polo Club has been designed to meet or exceed the proposed effluent limits with tertiary treatment, disinfection and aeration. A sampling manhole will be located after the aeration system to allow the operator to take samples for required testing. ~~The treated wastewater being discharged into the onsite stream will be much cleaner than which is being discharged from nearby septic systems.~~

According to USGS "StreamStats", 50% of the time the flow in the stream at the discharge location exceeds 0.295 cubic feet per second. However, with regard to daily flow rates, stream flow statistics are not relevant to intermittent stream flow discharge limits as the limits are designed specifically for streams that are periodically dry and are not based on a percentage of flow within the stream.

Comment #1: ***Public Hearing Comment August 6, 2020, Bill Feder, 29 Rockwood Drive.*** When the permit standard for an intermittent stream is a percentage of or relates to the existing stream flow and there is no flow, what are the standards used for the permit?

Response #1: Intermittent stream effluent limits are not based on a percentage of existing stream flow. Intermittent stream effluent limits are set with the consideration that the stream below the discharge point will periodically have very little flow or go dry.

Comment #2: ***Public Hearing Comment August 6, 2020, Bill Feder, 29 Rockwood Drive.*** If the plant fails, the sewage will not be completely treated and will be discharged into an empty swale with no water dilution.

Response #2: The plant will be monitored daily by a licensed plant operator to ensure compliance with the discharge requirements. Should a problem occur, operator staff are trained in operating the plant and can make the necessary adjustment to the operation to ensure compliance. Should a mechanical failure occur the plant is equipped with redundant systems to ensure that it can continue to operate while repairs are made. The proposed plant will not have a by-pass or overflow weir, devices common in large municipal sewage treatment plants. Rather, the proposed treatment plant equipment consists of closed process vessels without by-passes. The primary treatment is a large, buried settling tank. The discharge from the primary tank will flow via gravity in a solid pipe to the secondary treatment unit (the SBR). The SBR is a buried large fiberglass enclosed tank. Discharge from the secondary treatment will be via pumps. The secondary treated water will be pumped to tertiary filtration treatment units. The filtration units are closed pressure vessels with the water passing through media prior flowing to disinfection. As required by NYSDEC, the treatment plant will be equipped with an emergency generator to assure treatment during power outages.

Comment #12: ***Public Hearing Comment August 6, 2020, Planning Board Member Frank Galli.*** What is the cost to hook up a sewer line/trunk line up Union Avenue? What is the cost difference between the sewer plant and the trunk line, between the maintenance of the plant or just hooking up to a trunk line and then there is no maintenance? The Applicant should provide a cost benefit analysis between the two alternatives.

Response #12:

Forcemain: An alternate method for treating effluent studied in the SDEIS is to pump the sewage through a privately owned and maintained 6~~an 8~~" sanitary sewer forcemain, to be constructed within the right of way in NYS Route 300, which would connect to the existing Town of Newburgh sewer system located in the area of Union Avenue and NYS Route 300.

The sanitary forcemain would include an additional 5,2400 linear feet of forcemain (approximately 400 l.f. onsite and 4,800 l.f. offsite), an onsite pump station with~~,~~ flow meter, a generator, an air release valve and one or more air release manholes and 12 cleanout manholes. Installation of the forcemain in the NYS Route 300 Right of Way would require shoulder excavation, bedding and backfill material, backfill (labor), rock excavation and trucking, restoration of road surfaces, shoulder re-pavement, traffic control during construction and a full time DOT inspection. Additional fees and expenses associated with the forcemain include engineering and permitting, initial DOT Use & Occupancy User Fee and the Town of Newburgh Outside User Fee. ~~and reconstruction of the DOT ROW and/or shoulder.~~ The ~~construction~~ costs to construct and utilize ~~associated with~~ the sanitary forcemain are estimated to be approximately $2,529,948.00~~$1.6 million~~, which are~~.~~ broken down as follows:

Component	Quantity	Price Per Unit	Total
-	-	-	-
Shoulder Excavation(labor) (l.f.)	4800	25	120,000.00
Bedding & Backfill material (cy)	5870	30	176,100.00
Backfill (labor) (l.f.)	4800	25	120,000.00
6" diameter blue brute force main (l.f.)	4800	14	67,200.00
Rock Excavation and trucking (20% of trench exc (cy))	1174	300	352,200.00
Shoulder Restoration - 5' wide (s.y.), 3" binder, 2" top	2667	50	133,350.00
Traffic Control during Construction (days)	48	1500	72,000.00
Pump Station	-	-	90,000.00
Generator	-	-	60,000.00
Air Release Valve	1	-	4,800.00
Manhole for Air Release Valve	1	-	5,000.00
Clean Out Manholes	12	5000	60,000.00
Full Time DOT inspector	-	-	32,640.00
-	-	**Subtotal 1**	1,293,290.00
Fees	-	-	-
Contingency (10%)	-	-	129,329.00
Engineering and permits (10%)	-	-	129,329.00
Initial DOT Use & Occupancy User Fee	-	-	10,000.00
-	-	**Subtotal 2**	**1,561,948.00**
Town/Newburgh Outside User Fee*	242	4000	968,000.00
-	-	**Total**	**2,529,948.00**

*The Town of Newburgh charges a one--time outside user fee of $4,000 per unit to connect to the Town of Newburgh collection system and to secure the required capacity for wastewater treatment at the City of Newburgh wastewater treatment plant.

In addition to these construction and start-up costs, the applicant would be required to pay for the ongoing maintenance and expenses related to the pump station, inspections and flushing of the force main, as needed, the annual DOT Use and Occupancy User Fee and pay for sewer fees, charged at outside user rates. These annual operational costs are estimated to cost $91,000. A breakdown of these costs is included in Appendix E.

~~In addition to the construction costs above, since the project is not located a Town of Newburgh sewer district, the applicant would be required to purchase sewer capacity from the Town through an outside user agreement. The current cost of purchasing sewer capacity is $4,000 per unit, or an additional cost of $968,000 ($4,000 x 242 units).~~

Perhaps as important as the cost of the forcemain, is the fact that it is uncertain that 1) the applicant could secure the necessary approvals and permits and 2) obtain them within a reasonable time frame. It is estimated that it will take the applicant a minimum of between 1.5 to 2 years to obtain the required permits and approvals.

- First, the applicant would be required to get the Town Board's permission to connect to the existing sewer system. At this time, it is unclear if the Town would issue such permission since it is dealing with other landowners in the area who want sewer and are either proposing their own private forcemains or extending the sewer trunk line down NYS Route 300. A proposed extension to the Crossroads Sewer Trunk line has been in consideration for over 10 years now and the resolution of such proposal is not within sight.
- Once the local approvals are in place, the applicant could then apply to the DOT to construct/install the forcemain along NYS Route 300. The applicant's traffic consultant contacted NYSDOT in August 2020 to discuss the potential project and was advised that since the forcemain would be privately owned, the approval process would be more detailed than if the municipality were to apply for the permits and would include ~~of t~~the following:
    - NYSDOT does not typically allow water, sewer, or gas to be installed under the travel lanes and preferrable outside of the shoulder area, if the Right of Way is sufficient for such utilities. If the Right of Way does not

permit, the applicant will be required to reconstruct the shoulder area after the utility is installed, to DOT specifications.

- ~~In the areas of the project site where the forcemain would be constructed, additional measures are required including the dedication of the land, which is an involved process and requires approval from the NYS Attorney General's office. This step alone typically takes between 9 and 12 months and under current conditions, could take as long as 15 months.~~
- ~~In those areas where the proposed forcemain crosses private property owned by others, the applicant would be required to obtain appropriate easements. The applicant attempted to obtain these easements previously during the permitting of the Driscoll/Polo Club application. While 4 easements were obtained, several other landowners were not amenable and even requests made by then Supervisor Wayne Booth went unheeded. As the applicant does not have the right of eminent domain, which can only be exercised by the municipality, inability to obtain all necessary easements would prohibit this process from moving forward.~~
- Since the proposed forcemain will be privately owned and ~~would~~ service an individual user, DOT would require a Use & Occupancy permit ~~that allows the utility~~ to function within the ~~State~~ Right-of-Way. The Use & Occupancy permit is processed through the NYSDOT Regional Real Estate Division and the Attorney General's office. The Use & Occupancy permit would also determine the initial and annual user fees required for a private use in ~~for occupying~~ the State's Right of Way~~, the cost of which is yet undetermined~~.
- Due to the traffic volumes along Route 300, a detailed Work Zone Traffic Control Plan would be submitted for approval, which would maintain traffic during the installation of the forcemain. The applicant would be required to pay for the additional police/DOT personnel required to maintain safety in this busy corridor.

- A PERM32 NYSDOT utility permit would be required as well as a PERM 33 Non-Utility permit, which is necessitated to conduct work within the State highway.
- ~~All proposed work and repairs to the Right of Way would be required to be bonded.~~

~~In conclusion, the sanitary forcemain alternative is estimated to cost approximately $2,568,000 plus DOT user fees, expenses relating to easements (attorneys, etc.), bonding and engineering and reviewing fees. In addition, the applicant would be required to pay for the ongoing maintenance and expenses related to the pump station. Maintaining the forcemain, which includes frequent cleaning remove solids and grease buildup, would be the responsibility of the Town of Newburgh and the costs of such maintenance would be the responsibility of the Town's taxpayers.~~

On Site Sewage Treatment Plant: The proposed sewage treatment plant, the applicant's preferred alternative, will be a newly constructed facility that is designed to the Ten States Standard, the same rigorous design standard that municipal wastewater treatment systems are required to meet. The Ten States Standard requires that the effluent be treated to a higher level in order to minimize to the greatest extent practicable any environmental impact.

As more fully discussed in Section 3.3 and Appendix D of the SDEIS, the proposed sewage treatment plant will include a buried primary settling tank for the removal of grit, solids and fat, oil and grease. The secondary treatment takes place in a sequencing batch reactor with extended aeration and activated sludge treatment. The third or tertiary treatment takes place in a third tank which contains a media filtration system. Finally, prior to discharge, the water from the tertiary system flows through an ultraviolet radiation system and then into a tank with aerators which increases the dissolved oxygen content to permit minimums or greater. The water that is ultimately discharged into the intermittent stream is cleaner than ~~water which is discharged every day from residential septic systems, and in many ways cleaner than~~ the water that is discharged into the Hudson River by the City of Newburgh Wastewater Treatment Plant.

The sewage treatment plant will be privately owned with no obligation on the municipality to take it over if the plant fails. Unlike other sewage treatment plants in the area that were mentioned during the public hearing process, at Polo Club there will be no sewage treatment corporation and all financial obligations for the sewage treatment plant will be responsibility of the apartment complex owner and/or its mortgagee. Consequently, the Town and its residents will not have any financial obligation to take over or to remediate this privately owned facility.

The sewage treatment plant will require a NYS DEC SPDES permit. It generally takes approximately 4 to 9 months for DEC to review and issue the SPDES permit, assuming all permit requirements are met.

The wastewater treatment plant is expected to cost $1,760,000~~300,000~~ to construct, which costs can be ~~plus engineering and review fees.~~broken down as follows:

Component		SF	Price/SF	Total
Building	Morton Building with	2000	150	$300,000.00
	foundation, slab, lighting, heat			
Generator	144 KW Prime,			$160,000.00
	240 Hp on Slab			
Sewage Treatment*	Package Plant			$1,040,000.00
Storage Tanks	Concrete tanks			$100,000.00
			Subtotal	$1,600,000.00
Contingency	Estimated 10%			$160,000.00
			TOTAL	**$1,760,000.00**

*A detailed list of the components of the package treatment plant are included in Appendix B of the Engineers Report for a Cost Analysis which report is included in Appendix E of the FSEIS. The cost of the plant is as provided by the manufacturer and no line--item cost breakdown is available. In addition, the construction costs associated

with the package plant (excavating and burying tanks, etc.) are included in the price of the plant.

In conclusion, after extensive study, the applicant is proposing to pursue the sewage treatment plant alternative for the following reasons:

1. The environmental impact of the sewage treatment plant will be minimal given the requirement that the plant meet the Ten States Standard. The resulting effluent discharged to the intermittent stream will be as clean or cleaner than if the effluent is treated and discharged by the City of Newburgh sewage treatment plant.
2. The cost to construct the forcemain is ~~more than twice the cost to construct the~~ approximately $770,000 more than the cost to construct the sewage treatment plant ~~and this estimate does not include the additional DOT user fees and other fees outlined above~~.
3. The concerns that the plant will fail and the Town will be required to take it over are erroneous. The sewage treatment plant will be owned by a single entity which will be solely responsible for all costs and expenses relating to upkeep and maintenance of the sewage treatment plant. This situation is materially different from other plants in the area that are run by Transportation Corporations which require the Town to act in the event the plant fails.

The uncertainty of obtaining the approvals required for the forcemain may jeopardize the viability of the project. While it is fairly certain that if the sewage treatment plant is designed to meet DEC standards, the agency will issue the requisite SPDES permit. Alternatively, with respect to the forcemain, the numerous discretionary agency approvals and time required to pursue those approvals could result in the project losing the financial opportunities presently available including favorable interest rates and liquidity in the marketplace.

Comment #13: ***Public Hearing Comment August 20, 2020, Bill Feder, 29 Rockwood Drive.*** With respect to the cost analysis, in addition to the actual purchase of the plant

and installation, all operation and maintenance costs should be included including chemicals/disposal, cost to operate on a daily basis, maintenance and repairs.

Response #13: The estimated monthly cost to operate the wastewater treatment plant is ~~$4,000.00 of which Chemicals is 5%, Disposal of Sludge is 15%, Energy is 10%, Maintenance is 15%, Personnel is 35% and Interest is 20%.~~estimated at $48,000 per year. A detailed breakdown of these costs is included in the Engineers Report in Appendix E.

Comment #14: ***Public Hearing Comment August 20, 2020, Bill Feder, 29 Rockwood Drive.*** What's the life expectancy of the plant and what will happen at that point. Would it be upgraded or would the Town wind up assuming operation because the applicant doesn't continue with their responsibility.

Response #14: The tanks have 35 to 50-year life expectancies. Pumps and mechanical equipment have shorter life expectancies. The mechanical equipment will be repaired or replaced as needed. The sewage treatment plant will be owned by a single entity which will be solely responsible for all costs and expenses relating to upkeep and maintenance of the sewage treatment plant. This situation is materially different from other plants in the area that are run by Transportation Corporations which require the Town to act in the event the plant fails.

Comment #40: ***Pat Hines letter dated September 11, 2020.*** The Sanitary Sewer Treatment Plant report identifies preliminary effluent limits from DEC dated April 1, 2020. Information pertaining to the DEC and the discharge rates should be identified.

Response #40: The Preliminary Discharge Effluent Limits for the proposed sewage treatment plant at Polo Club were provided by a NYSDEC Water Quality Engineer, Aparna Roy, via email on April 1, 2020, which has been included in Appendix E of this FSEIS. The daily discharge rate (design flow) submitted to the NYSDEC for their preliminary effluent limits was 37,150 gallons per day. Intermittent effluent limits are not based on discharge rates.

Comment #41: ***Pat Hines letter dated September 11, 2020.*** The information identifies a chlorine residual, however the design report identifies the use of ultraviolet treatment for disinfection.

Response #41: The Preliminary NYSDEC Effluents Limits always include a Daily Maximum Total Residual Chlorine whether or not this parameter is required. In this case, as the plant will include ultraviolet treatment for disinfection, there will be no chlorine residual.

Comment #42: ***Pat Hines letter dated September 11, 2020.*** The Earth Tech report included in the Waste Water Treatment Plant design identifies BOD at 250 ml per liter in the influent. Based on the use of water saving fixtures, this office has seen BOD's in the range of 300 – 400 for influent.

Response #42: ~~An influent BOD of 250 mg/l is typical for untreated domestic wastewater. Values of 300 – 400 mg/l are generally seen in commercial and municipal flows which include restaurants and other high load producer as per:~~

~~o Characteristics of Residential Wastewater https://www.app4water.com/characteristics-of-residential-wastewater/~~

~~o Consultation with Earth Tek Environmental Clean Water Solutions~~Higher BOD/L loading is probably experienced at other Town plants due to water saving fixtures. Since the amount of waste being treated does not change but the volume of water is significantly lower, it is understandable that the loading rates are higher. The plans are designed for the amount of waste and will function as intended as the volumes will be lower. For example, 300 mg/l x 30,000 gallons will have a similar loading rates as 250mg/l x40,000 gallons.

THE POLO CLUB
SFEIS

Appendix B

Written Comments

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

THE POLO CLUB
SFEIS

Appendix B2

McGoey Hauser Review Letter Sept 11, 2020

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS D.P.C.

MARK J. EDSALL, P.E., P.P. (NY, NJ & PA)
MICHAEL W. WEEKS, P.E. (NY, NJ & PA)
MICHAEL J. LAMOREAUX, P.E. (NY, NJ, PA, VT, VA & CT)
PATRICK J. HINES
LYLE R. SHUTE, P.E. LEED-AP (NY, NJ, PA)

Main Office
33 Airport Center Drive
Suite 202
New Windsor, New York 12553

(845) 567-3100
fax: (845) 567-3232
e-mail: mheny@mhepc.com

Principal Emeritus:
RICHARD D. McGOEY, P.E. (NY & PA)
WILLIAM J. HAUSER, P.E. (NY, NJ & PA)

TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS

PROJECT:	**THE POLO CLUB SENIOR HOUSING**
PROJECT NO.:	**2018-12**
PROJECT LOCATION:	**SECTION 39, BLOCK 1, LOT 1 & 2.12**
REVIEW DATE:	**11 SEPTEMBER 2020**
MEETING DATE:	**17 SEPTEMBER 2020**
PROJECT REPRESENTATIVE:	**ENGINEERING & SURVEYING PROPERTIES**

1. The Applicants representatives are requested to further evaluate the sanitary sewer treatment and discharge proposed. A further discussion on the discharge limits should be provided to clarify the intermittent stream standard design parameters. Information pertaining to average daily stream flow should be incorporated into the report. Information from NYSDEC stream stats can be utilized. #32

2. Alternative sewer design connecting to the Town of Newburgh's sanitary sewer collection system should be further evaluated. Schematic design plans including project routing should be provided. Any additional permitting or impacts depicted along the project routing should be identified. #33

3. In response to previous comments the Applicant has identified that access to the wetland mitigation construction area would be from adjoining properties. Information pertaining to this access and any impacts regarding this should be further identified. Information pertaining to how the project will be constructed if access from adjoining properties cannot be gained should be further clarified. #34

4. Status of the SDEIS has been updated to include information from the NYS Office of Parks, Recreation and Historic Preservation including a 29 May 2020 No Impact letter, which has been incorporated into the SWPPP as an attachment. #35

5. A map should be provided in the SWPPP identifying the location of all permeability and deep test holes. A discussion should be incorporated into the plan identifying depths of test holes in relationship to final grading of the infiltration basins. #36

6. The SWPPP narrative identifies a 5 inch per hour rate. The model of the infiltration basin identies14.5 inches per hour. The text in the report identifies greater than 5 inches per hour. #37

The model and report should be checked with the soil testing which has been performed.

#38 7. Plans and SWPPP should identify whether safety fencing will be provided for all Stormwater Management Facilities which contain standing water during any portion of the model storm events.

#39 8. The flow characteristic data in the Potable Water report identifies testing performed 6 July 1996. It is requested the Applicants evaluate this testing in coordination with the Water Department to confirm that the flows and pressures utilized in their report are still valid based on bringing the Delaware Aqueduct Plant online since 1996.

#40 9. The Sanitary Sewer Treatment Plant report identifies preliminary effluent limits from DEC dated 1 April 2020. Information pertaining to the DEC and the discharge rates should be identified.

#41 10. The information identifies a chlorine residual, however the design report identifies the use of ultraviolet treatment for disinfection.

#42 11. The Earth Tech report included in the Waste Water Treatment Plant design identifies BOD at 250ml per liter in the influent. Based on the use of water saving fixtures this office has seen BOD's in the range of 300-400 for influent.

Respectfully submitted,

McGoey, Hauser and Edsall
Consulting Engineers, D.P.C.

_____
Patrick J. Hines
Principal

PJH/kbw

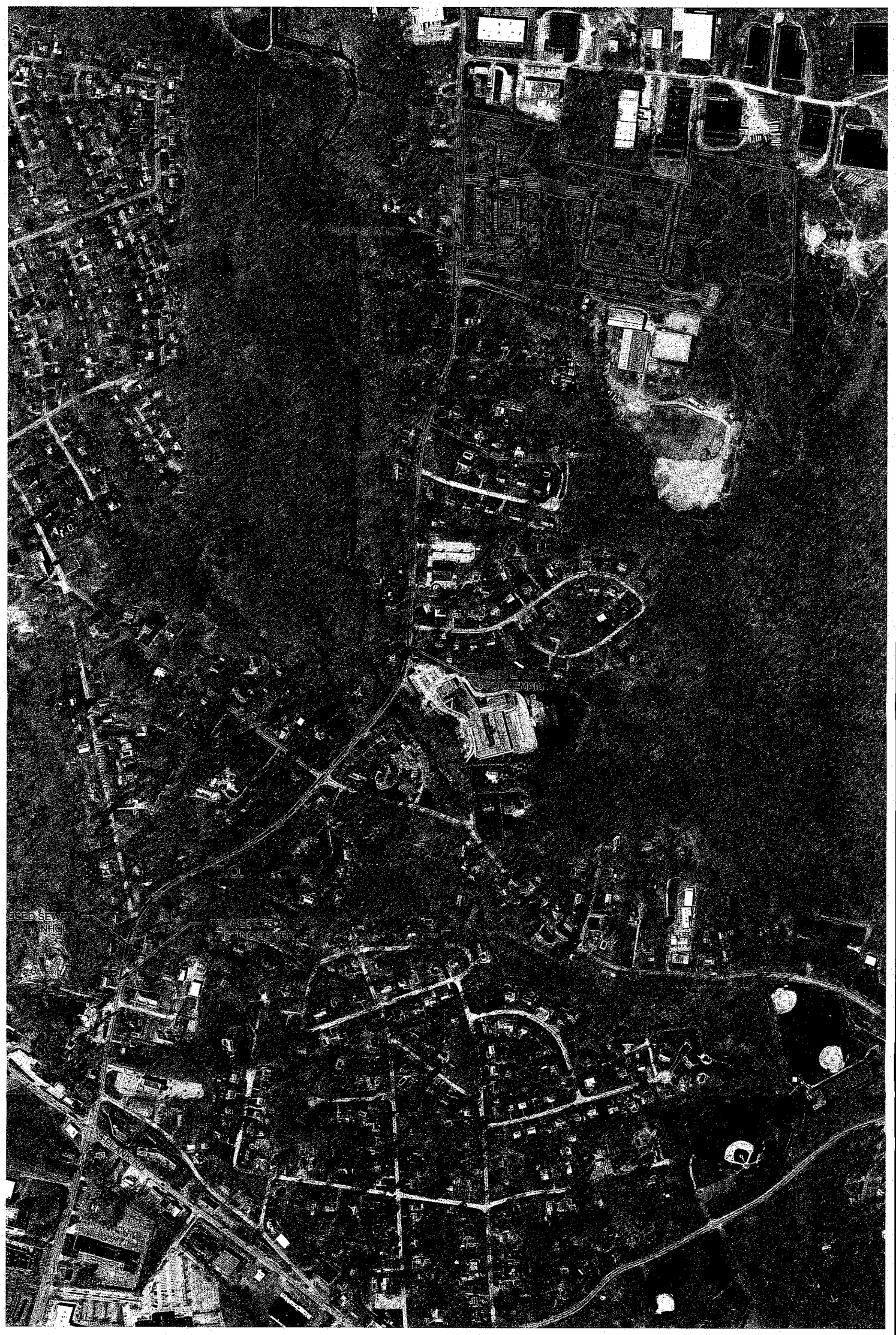
THE POLO CLUB
SFEIS

Appendix C

Landscaping Plans

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

Drawing Name: Z:\114.01 – The Polo Club (Muthig)\Site Plan.dwg Date Printed: Apr 28, 2020, 4:16pm



SEWER SYSTEM ALTERNATIVE LAYOUT	THE POLO CLUB NYS ROUTE 300 TOWN OF NEWBURGH ORANGE COUNTY, NEW YORK	DATE: 04/28/2020	JOB # 114.01	ENGINEERING & SURVEYING PROPERTIES Achieving Successful Results with Innovative Designs	71 CLINTON STREET MONTGOMERY, NY 12549 Ph: (845) 457-7727 Fx: (845) 457-1899
		SCALE: 1"=500'	SHEET # F-3.3C		

This page is left intentionally blank

THE POLO CLUB
SFEIS

Appendix D

SWPPP

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

INFILTRATION TEST RESULTS

WO. NO.	DATE	REVISED	SHEET	OF
114.01	04/29/20			

PROJECT TITLE: **The Polo Club**

LOCATION:

CALCULATED BY: **MP**

APPROVED BY: **JS**

REF DRAWING(S):

Test Hole Number	Test Hole Depth	Test Hole Diameter	Time	Infiltration Test Runs (Water drop in inches over One Hour)				Average Drop (inches)
A1	36"	6"	Start:	0	0	0	0	7.8
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	8.00	8.00	7.50	7.50	
Comments:								
A2	24"	6"	Start:	0	0	0	0	17.6
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	21.00	19.00	16.00	14.50	
16								
A3	12"	6"	Start:	0	0	0	0	18.9
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	21.00	19.00	18.00	17.50	
Comments:								
A4	24"	6"	Start:	0	0	0	0	14.0
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	16.00	14.50	12.50	13.00	
Comments:								
B1	24"	6"	Start:	0	0	0	0	18.6
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	19.50	19.00	18.50	17.50	
Comments:								
B2	24"	6"	Start:	0	0	0	0	2.5
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	2.00	2.50	2.50	3.00	
Comments:								
B3	12"	6"	Start:	0	0	0	0	20.5
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	24.00	23.00	18.00	17.00	
Comments:								
B5	24"	6"	Start:	0	0	0	0	5.3
			Finish:	1 Hour	1 Hour	1 Hour	1 Hour	
			Drop:	7.50	6.00	4.00	3.50	
Comments:								

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

DEEP TEST PIT SOIL RESULTS

WO. NO.	DATE	REVISED	SHEET	OF
114.01	**04/29/20**		**1**	**2**

PROJECT TITLE		LOCATION
The Polo Club		**Town of Newburgh**
CALCULATED BY **MP**	APPROVED BY **JS**	REF DRAWING(S)

Deep Test #	Depth	Soil Description
A1	0" - 12" 12" - 84"	Organic Topsoil/ Rocky layer Tan Sandy Silty Clay Loam with mottling Water @ 84"
A2	0" - 12" 12" - 60"	Organic Topsoil/ Rocky layer Tan Sandy Silty Clay Loam with mottling Water @ 60"
A3	0" - 12" 12" - 48"	Organic Topsoil/ Rocky layer Tan Sandy Silty Clay Loam with mottling Water @ 48"
A4	0" - 6" 6" - 60"	Organic Topsoil/ Rocky layer Tan Sandy Silty Clay Loam with cobbles; with mottling Small amount of Water @ 60"+

Comments:

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

DEEP TEST PIT SOIL RESULTS

WO. NO.	DATE	REVISED	SHEET	OF
114.01	04/29/20		2	2

PROJECT TITLE: **The Polo Club**

LOCATION: **Town of Newburgh**

CALCULATED BY: **MP**

APPROVED BY: **JS**

REF DRAWING(S):

Deep Test #	Depth	Soil Description
B1	0" - 3" 3" - 72" 72"+	Organic Topsoil Tan Silty Sandy Loam Bedrock, No Water
B2	0" - 3" 3" - 60" 60"+	Organic Topsoil Brown Silty Sandy Clay Loam w/ shale Shale Bedrock Water @ 60"
B3	0" - 4" 4" - 54" 54"+	Organic Topsoil Tan Silty Sandy Loam Shale Bedrock Water @ 63"
B5	0" - 3" 3" - 66" 66"+	Organic Topsoil Brown Silty Sandy Clay Loam w/ shale Shale Bedrock Water @ 66"

Comments:

THE POLO CLUB
SFEIS

Appendix E

Wastewater

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

THE POLO CLUB
SFEIS

Appendix E2

Engineer's Report

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

0

ENGINEER'S REPORT

FOR A

COST ANALYSIS
of the

PRIVATE SEWER TREATMENT PLANT and

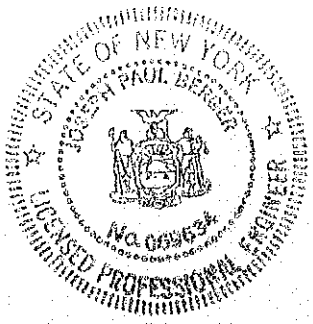
PRIVATE SANITARY FORCEMAIN ALTERNATIVE

TO SERVE

THE POLO CLUB

ROUTE 300

TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
TAX PARCELS: 39-1-1 & 39-1-2.12



Prepared for:
Spruce Creek LLC
Prepared by:

BERGER ENGINEERING AND SURVEYING PLLC
100 FULTON AVENUE
POUGHKEEPSIE NY 12603

10/12/20
REV 11/27/20

TABLE OF CONTENTS

SECTION		PAGE
1.0	INTRODUCTION	2
2.0	SITE DESCRIPTION	2
3.0	SANITARY SEWER FORCEMAIN	2
4.0	CONCLUSION	3

APPENDIX A FORCEMAIN LOCATION MAP
SHEET F3.3C
ENTITLED SEWER SYSTEM ALTERNATIVE LAYOUT
Dated 04/28/20
Prepared by Engineering & Surveying Properties

APPENDIX B SEWER TREATMENT PLANT SEQUENCING BATCH REACTOR EQUIPMENT LIST

1.0 INTRODUCTION

The Project Site consists of two parcels (SBL 39-1-1 & 2.12) containing 36.23 acres of land. The proposed project scope includes 242 multi-family units. Along with the apartments, there is an entry road and emergency access drive to NYS Route 300. All buildings will be connected to new town water mains and sewer mains which will be installed and maintained by the project sponsor.

Currently the project is not located within a Town of Newburgh sewer district. This report is to address providing a sanitary sewer forcemain from the project to connect to the existing Town Sanitary Sewer.

2.0 SITE DESCRIPTION

The proposed project site is approximately 36.23 acres in size and is located in the Town of Newburgh, Orange County, New York. The project site is a rectangular shaped plot of land that extends east from NYS Route 300. The project involves the approval of 242 multi-family units consisting of 100 one-bedroom and 142 two-bedroom apartments. These units will be constructed within 21 apartment buildings. The site will also have a clubhouse with pool, access roads and public utility infrastructure.

The site's entrance will be from NYS Route 300 which lies directly west of the project site. On the south, the property abuts Gardnertown Farms which is a horse stabling and riding facility. To the east of the site is undeveloped commercial property and to the north of the site lies Jeanne Drive with several developed commercial properties.

The site contains 1080 linear feet of an unnamed tributary of the Quassaic Creek, Class C, Non-protected. This small unnamed stream runs from north to south and starts and ends outside of the project boundary.

3.0 SANITARY SEWER

As proposed, the Polo Club will generate an average daily flow of 37,150 gallons per day of sanitary sewer and peak hourly flow of 103.2 gallons per minute or 4.0 times the average daily demand. The applicant is proposing to construct approximately 3,385 lf of 8" PVC SDR-35 sewer main and 21 manholes onsite to serve the Project. The wasterwater that is collected on-site will flow by gravity to a either an onsite sewer treatment plant located in the southeast portion of the site, or an onsite pump station located in the southwest corner of the site. This report provides a cost analysis of these two treatment alternatives.

3.1 Private Sewer Treatment Plant

The applicant's preferred alternative is to construct a private sewer treatment plant on the property. The plant will be designed to meet NYSDEC Standards, Ten State Standards and those of the Town of Newburgh. The applicant is proposing an Earthtek Sabre sequencing batch reactor (SBR) which includes a buried primary settling tank for the removal of grit, solids and fat, oil and grease. The secondary treatment takes place in a sequencing batch reactor with extended aeration and activated sludge treatment. The third or terriary treatment takes place in a third tank which contains a media filtration system. Finally, prior to discharge, the water from the tertiary system flows through an ultraviolet radiation system and then into a tank with aerators which increases the dissolved oxygen content to permit minimums or greater. A generator will be installed to supply power to the plant in the event of a disruption in electrical service. The sewer treatment plant has been designed to meet the Ten States Standard and intermittent stream standards.

The sewer treatment plant will consist of the following:

- A Morton Building with foundation, slab, heat and electric;
- A generator, 144 KW prime, 240 Hp on slab;
- Sewage Treatment Package Plant – a detailed list of the components of the treatment plant is included in Appendix B of this report; and

- Fiberglass tanks

The total estimated cost to construct and utilize the sewer treatment plant is $1,760,000.00, broken down as follows:

Component		SF	Price/SF	Total
Building	Morton Building with	2000	150	$300,000.00
	foundation, slab, lighting, heat			
Generator	144 KW Prime,			$160,000.00
	240 Hp on Slab			
Sewage Treatment*	Package Plant			$1,040,000.00
Storage Tanks	FRP tanks			$100,000.00
			Subtotal	$1,600,000.00
Contingency	Estimated 10%			$160,000.00
			TOTAL	**$1,760,000.00**

* A detailed list of the components of the package treatment plant are included in Appendix B of this report. The cost of the plant is as provided by the manufacturer and no line item cost breakdown is available. In addition, the construction costs associated with the package plant (excavating and burying tanks, etc.) are included in the price of the plant.

This cost estimate is similar to the industry standard estimate which is based on a cost per gallon of $42.50 (range of $40 to $45),(37,150 * $42.50= $1,560,300 plus a 10% contingency for a total of $1,716,330.00.

Annual operating costs for the sewer treatment plant include the following:

- Chemicals $ 2,400
- Sludge Removal $ 7,200
- Energy $ 4,800
- Maintenance $ 7,200
- Personnel $16,800
- Interest $ 9,600

Total: $48,000/year

3.2 Private Pump Station and Force Main

The applicant is studying, as an alternative to constructing a private sewer treatment plant, treating the project's wastewater by constructing a pump station and force main that would connect to the existing Town of Newburgh collection system. The pump station and forcemain would be held privately and all costs for installation and maintenance would be the responsibility of the owner of the apartment complex.

The wastewater would be gravity fed to a pump station on the southwest corner of the site and then pumped through 5,200 lf of 6" Blue Brute sanitary forcemain, approximately 400 feet on site and 4,800 feet off site. The off site forcemain would be constructed in the Right of Way along Rt 300 and connect to the existing Town collection system located in the area of Union Avenue and NYS Route 300. At this location there is an existing

main that flows south to NYS Route 52 before heading east along Route 52 to the City of Newburgh sewer system.

The forcemain will consist of:

- 4800 lf of 6-inch diameter Blue Brute force sanitary sewer (off site);
- A pump station with flow meter;
- Generator;
- Air release valve;
- Manhole for air release valve;
- 12 clean out manholes

Installation of the forcemain in the Route 300 Right of Way would require the following:

- Shoulder Excavation
- Bedding and backfill material
- Backfill – labor
- Rock excavation and trucking
- Restoration of road surfaces as well as shoulder pavement
- Traffic control during construction
- Full time DOT inspector

Additional fees and expenses associated with the forcemain include the following:

- Engineeering and permits
- Initial DOT Use & Occupancy User Fee
- Town of Newburgh Outside User Fee

4.0 Cost Estimate to Install and Maintain the Sanitary Force Main and Pump Station

The total estimated cost to construct and utilize the sanitary forcemain is $2,529,948.00, broken down as follows:

Component	Quantity	Price Per Unit	Total
Shoulder Excavation(labor) (l.f.)	4800	25	120,000.00
Bedding & Backfill material (cy)	5870	30	176,100.00
Backfill (labor) (l.f.)	4800	25	120,000.00
6" diameter bue brute force main (l.f.)	4800	14	67,200.00
Rock Excavation and trucking (20% of trench exc (cy))	1174	300	352,200.00
Shoulder Restoration - 5' wide (s.y.), 3" binder, 2" top	2667	50	133,350.00
Traffic Control during Construction (days)	48	1500	72,000.00
Pump Station			90,000.00
Generator			60,000.00
Air Release Valve	1		4,800.00
Manhole for Air Release Valve	1		5,000.00
Clean Out Manholes	12	5000	60,000.00
Full Time DOT inspector			32,640.00
		Subtotal 1	1,293,290.00
Fees			
Contingency (10%)			129,329.00

Engineering and permits (10%)			129,329.00
Inititial DOT Use & Occupancy User Fee & Approval			10,000.00
		Subtotal 2	**1,561,948.00**
Town/Newburgh Outside User Fee*	242	4000	968,000.00
		Total	**2,529,948.00**

* The Town of Newburgh charges a one time outside user fee of $4,000 per unit to connect to the Town of Newburgh collection system and to secure the required capacity for wastewater treatment at the City of Newburgh wastewater treatment plant. During operation of the apartment complex, the complex is charged quarterly a fee for sewage treatment at an outside user rate which is greater than that paid by in district users.

Annual operational costs in addition to the Town's user fees for the sanitary forcemain include the following:

- Inspections and flushing as needed (1 x 5 years/$25,000) $5,000/yr
- Pump Station maintenance $5,000/yr
- Yearly DOT Use and Occupancy User Fee $ 4,000/yr
- Outside User sewer fees for Crossroads Sewer District $ 77,000/yr

Total **$91,000**

Noted issues with a sanitary forcemain incude:

The dissolved oxygen content of the wastewater is often depleted in the wet-well of the lift station, and its subsequent passage through the force main results in the discharge of septic wastewater, which not only lacks oxygen but often contains sulfides. This condition often produces a smell at the air release manholes and at pump stations.

Location of forcemain in the Right of Way of the state highway will cause traffic delays during construction and at other times when repair and maintenance are required.

4.0 CONCLUSION

The forcemain cost would be approximately $2,500,000 while a wastewater treatment plant would cost approximately $1,760,000. The annual operating costs for the sewer treatment plant is substantially less than the cost of the forcemain as the Town of Newburgh charges a per gallon sewer fee.

APPENDIX A

APPENDIX B

The Polo Club Sewage Treatment Plant

Item	Description	Quantity	Units
	Primary tank, hold-down equipment, risers, and lids		
1	40,000 gallon, 2-compartment, 10' dia. tank	1	ea.
2	FRP hold-down straps	10	ea.
3	Hold-down strap turnbuckles	10	ea.
4	1/2" galvanized wire rope deadmen straps	200	lft.
5	1/2" galvanized wire rope clips	120	ea.
6	Deadmen set	1	ea.
7	30" riser	25	lft.
8	30" lids	5	ea.
9	36" riser	5	lft.
10	36" lids	1	ea.
	Effluent filter and accessories		
11	Effluent filter	2	ea.
12	Smart Filter Switch	1	ea.
13	1" sch. 80 PVC pipe	20	lft.
14	1" sch. 80 PVC tee	2	ea.
15	4" sch. 80 PVC pipe	12	lft.
16	4" sch. 80 PVC tee	1	ea.
17	4" sch. 80 PVC cross	1	ea.
18	4" sch. 80 PVC elbow	2	ea.
19	4" sch. 80 PVC 45 elbow	2	ea.
	Primary pumps, piping and accessories		
20	Primary pumps	2	ea.
21	Guide rail base and upper bracket	2	ea.
22	1" 316 SS sch. 10 pipe for guide rails	40	lft.
23	5/8" x 2" SS bolts for pump base	8	ea.
24	5/8" SS flat washers x 10/box	2	box
25	5/8" SS lock washers x 10/box	1	box
26	5/8" SS nuts x 10/box	1	box
27	2" sch. 80 PVC pipe	30	lft.
28	2" sch. 80 PVC male adapters	2	ea.
29	2" sch. 80 PVC 45 elbow	4	ea.
30	2" sch. 80 PVC ball valves	2	ea.
31	2" sch. 80 PVC elbow	4	ea.
32	2" sch. 80 PVC couplings	2	ea.

33	2" sch. 80 PVC tee	1	ea.
34	Pressure filter with 1/8" holes	2	ea.
35	Pressure filter removal tool	1	ea.
36	Pressure filter pipe support	1	ea.
	Primary controls - transducers, floats, and accessories		
37	Radar level sensor	1	ea.
38	Radar mounting bracket	1	ea.
39	Chain bracket	2	ea.
40	1/4" SS lifting chain	30	lft.
41	1/4" SS shackles	6	ea.
42	3/8" x 1" SS chain bracket bolt (10/box)	1	ea.
43	3/8" SS chain bracket sealing washer (10/box)	1	ea.
44	3/8" SS chain bracket lock nut (25/box)	1	ea.
45	Silicone sealant for chain bracket bolt	1	ea.
46	Float mounts	4	ea.
47	Float pipe mount bracket for 1-inch pipe	1	ea.
48	1" sch. 80 PVC pipe (float tree)	20	lft.
49	#10 SS screws for pipe bracket and J-hooks (50/box)	1	ea.
50	J-Hooks for wire bundles	5	ea.

Item	Description	Quantity	Units
	SBR tank, hold-down equipment, risers, and lids		
1	35,000-gallon, 10' dia., single compartment tank	1	ea.
2	FRP hold-down straps	8	ea.
3	Hold-down strap turnbuckles	8	ea.
4	1/2" galv. wire rope deadmen straps	160	lft.
5	1/2" galvanized wire rope clips	96	ea.
6	Deadmen set	1	ea.
7	30" risers	14	lft.
8	30" lids	7	ea.
9	Fiberglass resin for riser attachment (5 gal. pail)	1	ea.
10	Fiberglass activator for riser attachment (5 gal. pail)	1	ea.
11	Carbon filter lid vents	7	ea.
12	2" pipe grommets for vents	7	ea.
	Mixing pumps, piping, and accessories		
13	Jet mixing pump	2	ea.
14	Spare mixing pump	1	ea.
15	Guide rail base and upper bracket	2	ea.
16	1-1/4" 316 SS sch. 10 pipe for guide rails	40	lft.
17	5/8" x 2" SS bolts for guide rail base	8	ea.
18	5/8" SS flat washers for guide rail base x 10/box	2	box
19	5/8" SS lock washers for guide rail base x 10/box	1	box
20	5/8" SS nuts for guide rail base x 10/box	1	box
21	7/16" x 1-1/2" SS bolts for guide rail bracket x 5/box	1	box
22	7/16" SS flat washers for guide rail bracket x 25/box	1	box

23	7/16" SS lock washers for guide rail bracket x 25/box	1	box
24	7/16" SS nuts for guide rail bracket x 25/box	1	box
25	FRP flanged aeration nozzles	4	ea.
26	3" DI flange x flange tee	2	ea.
27	3" flange gasket	6	ea.
28	2" sch. 80 PVC pipe	60	lft.
29	2" sch. 80 PVC elbow	8	ea.
30	2" sch. 80 PVC 45 elbow	8	ea.
31	2" sch. 80 PVC male adapters	4	ea.
32	2" schedule 80 PVC couplings	4	ea.
33	Air blowers	2	ea.
34	2" check valve	2	ea.
35	2" inlet filter/silencer	2	ea.
36	Tap for dirty filter indicator	2	ea.
37	Dirty filter indicator	2	ea.
38	2" safety valve	2	ea.
39	Pressure gauge, 0-5 psi	1	ea.
40	2" sch. 80 CPVC pipe	20	lft.
41	2" sch. 80 CPVC elbow	4	ea.
42	2" sch. 80 CPVC tee	3	ea.
43	2" sch. 80 CPVC coupling	3	ea.
44	2" sch. 80 CPVC male adapter	12	ea.
45	2" sch. 80 CPVC ball valve	2	ea.
46	2" escutcheon plates	6	ea.
47	2" pipe clamping hanger	2	ea.
48	3/8" - 16 threaded rod - 3'	1	ea.
49	Threaded rod flange - 3/8" - 16	2	ea.
	Decanters, piping and accessories		
50	Floating decanter	2	ea.
51	1/4" SS lifting chain	60	lft.
52	1/4" SS shackles	12	ea.
53	Piping and fittings for disconnects	1	ls.
	WAS pump, piping, and accessories		
54	WAS pump	1	ea.
55	Spare WAS pump	1	ea.
56	Guide rail base and upper bracket	1	ea.
57	5/8" x 2" SS bolts for WAS pump base	4	ea.
58	5/8" SS flat washers x 10/box	1	box
59	5/8" SS lock washers x 10/box	1	box
60	5/8" SS nuts x 10/box	1	box
61	1" 316 SS sch. 10 pipe for guide rails	20	lft.
62	2" sch. 80 PVC pipe	15	lft.
63	2" sch. 80 PVC male adapters	1	ea.
64	2" sch. 80 PVC 45 elbow	2	ea.
65	2" sch. 80 PVC elbow	2	ea.
66	2" sch. 80 PVC couplings	2	ea.

67	2" sch. 80 PVC tee	1	ea.
68	2 " sch. 80 PVC socket x 1" FPT reducer coupling	1	ea.
69	1" air/vacuum valve	1	ea.
70	PVC primer	1	qt.
71	PVC glue	2	qt.
72	1/4" SS lifting chain	45	lft.
73	1/4" SS shackles	9	ea.
74	Chain bracket	12	ea.
75	3/8" x 1" SS chain bracket bolt (10/box)	2	ea.
76	3/8" SS chain bracket sealing washer (10/box)	2	ea.
77	3/8" SS chain bracket lock nut (25/box)	1	ea.
78	Silicone sealant for chain bracket bolt	1	ea.
	SBR controls, DO probe, transducers, floats, and accessories		
79	SBR control panel with backup floats	1	ea.
80	Radar level sensor	1	ea.
81	Radar mounting bracket	1	ea.
82	1" sch. 80 PVC pipe (float tree)	20	lft.
83	Float pipe mount bracket for 1" pipe	2	ea.
84	Float mounts	5	ea.
85	#10 SS screws for pipe bracket and J-hooks (50/box)	1	ea.
86	J-Hooks for wire bundles	8	ea.
87	DO probe	1	ea.
88	1-1/4" sch. 80 PVC pipe	20	ft.
89	1-1/4" sch. 80 PVC male adapter	1	ea.

Item	Description	Quantity	Units
	Tertiary equipment		
1	Sand Filter	2	ea.
2	Filter media	80	ea.
3	UV disinfection unit with manual wiper system	2	ea.
4	Spare UV lamps	16	ea.
5	Spare UV quartz sleeves	16	ea.
6	UV control panel stand	2	ea.
7	4" magnetic flow meter	1	ea.

THE POLO CLUB
SFEIS

Appendix F

NYSDOT Letter

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

ANDREW M. CUOMO
Governor

MARIE THERESE DOMINGUEZ
Commissioner

JANICE A. McLACHLAN
Acting Chief Counsel

December 5, 2019

Joseph Muccin
Maser Consulting
400 Columbus Avenue
Valhalla, NY 10595

RE: Freedom of Information Law Request FR8-19-006816
Traffic Signal Timings NYS Rt. 300 & NYS Rt. 32 - Signal No. O-34

VIA: E-Mail (No Hard Copy to Follow)

Dear Mr. Muccin:

This correspondence is in reference to your October 28, 2019 Freedom of Information Law (FOIL) request.

Enclosed are the records responsive to your request.

Please indicate the FOIL request number when corresponding on this subject.

Sincerely,

Irene M. Hanson
Records Access Officer

STATION: **830049**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 52** ROAD NAME: **S Plank Rd**
DIRECTION: Eastbound FACTOR GROUP: 30
STATE DIR CODE: 6 WK OF YR: 45
DATE OF COUNT: 11/01/2016
NOTES LANE 1: EB travel lane

FROM: **CR 23 ROCK CUT RD**
REC. SERIAL #: DS60
PLACEMENT: 112' S of Elmhurst Rd
@ REF MARKER:
ADDL DATA: Class Speed
COUNT TYPE: VEHICLES

TO: **RT 300 PLATTERKILL TPK**
FUNC. CLASS: 16
NHS: no
JURIS: City
CC Stn:
BATCH ID: DOT-R08C45aTST5195

COUNTY: **Orange**
TOWN:
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE: 2001714

COUNT TAKEN BY: ORG CODE: TST INITIALS: JM
PROCESSED BY: ORG CODE: DOT INITIALS: JS

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T										251	197	213	208	218	214	289	260	264	242	146	94	62	47	31			
2	W	8	7	9	14	30	79	229	318	326	238	200	207	229	211	233	259	257	287	229	165	98	69	48	26	3776	326	8
3	T	20	10	11	25	36	76	258	295	305	249	210	217	192	214	208	240	252	289	224	160	97	65	47	31	3731	305	8
4	F	20	3	8	14	32	76	238	295																	3731	305	8
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T																											
16	W																											
17	T																											
18	F																											
19	S																											
20	S																											
21	M																											
22	T																											
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	ADT
16	7	9	18	33	77	242	303	316	246	202	212	210	214	218	263	256	280	232	157	96	65	47	29	3748

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED
4	71	4	71	316	8%	1.000	1.017	**AADT 3685**

STATION: **830049**

New York State Department of Transportation
Traffic Count Hourly Report

ROUTE #: **NY 52** ROAD NAME: **S Plank Rd**
DIRECTION: Westbound FACTOR GROUP: 30
STATE DIR CODE: 7 WK OF YR: 45
DATE OF COUNT: 11/01/2016
NOTES LANE 1: WB travel lane

FROM: **CR 23 ROCK CUT RD** TO: **RT 300 PLATTERKILL TPK**
REC. SERIAL #: DS60 FUNC. CLASS: 16
PLACEMENT: 112' S of Elmhurst Rd NHS: no
@ REF MARKER: JURIS: City
ADDL DATA: Class Speed CC Stn:
COUNT TYPE: VEHICLES BATCH ID: DOT-R08C45aTST5195

COUNTY: **Orange**
TOWN:
LION#:
BIN:
RR CROSSING:
HPMS SAMPLE: 2001714

COUNT TAKEN BY: ORG CODE: TST INITIALS: JM
PROCESSED BY: ORG CODE: DOT INITIALS: JS

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	T										151	179	182	197	241	257	312	398	431	309	213	168	121	75	42			
2	W	20	14	11	6	13	20	83	149	149	166	163	191	202	251	286	338	402	390	367	223	163	120	62	48	3837	402	16
3	T	21	19	13	15	8	20	82	147	151	147	154	207	208	215	265	336	377	415	352	267	177	120	76	54	3846	415	17
4	F	24	17	10	7	10	24	66	132																			
5	S																											
6	S																											
7	M																											
8	T																											
9	W																											
10	T																											
11	F																											
12	S																											
13	S																											
14	M																											
15	T																											
16	W																											
17	T																											
18	F																											
19	S																											
20	S																											
21	M																											
22	T																											
23	W																											
24	T																											
25	F																											
26	S																											
27	S																											
28	M																											
29	T																											
30	W																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
22	17	11	9	10	21	77	143	150	155	165	193	202	236	269	329	392	412	343	234	169	120	71	48	3798

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED
4	71	4	71	412	11%	1.000	1.017	**AADT 3735**

STATION: 830074

New York State Department of Transportation
Roadway Traffic Count Hourly Report

ROUTE/ROAD:	NY300	FROM:	RT 32	TO:	RT 52	REGION-COUNTY:	8-ORANGE
FED DIR CODE:	3, 7	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Newburgh-Town-0569
ST DIR CODE:	7	END MILEPOST:	7.01	FACTOR GROUP:	30	BIN:	3345000
DOT ID:	100268	LANES BY DIR:	1 East 1 West	CC STN:		RR CROSSING:	
BEGIN DATE:	4/23/2014	WEEK OF YEAR:	17	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:	SB TRAVEL LANE	PLACEMENT:	.768MI NORTH OF RT 52	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-KAJ	PROCESSED BY:	DOT-CEL	BATCH ID:	DOT-R8 Wk 17	SPEED LIMIT:	45

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
4/23, Wed																	1061	1143	911	650	404	366	209	145	4889		
4/24, Thu	73	41	39	49	140	229	514	805	880	745	649	737	848	825	915	963	1060	1142	926	652	546	411	220	169	13578	1142	17-18
4/25, Fri	83	47	34	63	112	230	454	778	885	750	720	747	885	864	940	1091	1174	1113	942	730	574	446	320	225	14207	1174	16-17
4/26, Sat	130	77	52	42	37	108	181	340	526	666	727	913	906	871	851	916	898	717	739	607	451	366	304	220	11645	916	15-16
4/27, Sun	179	75	38	31	26	70	136	196	352	594	685	769	878	905	841	920	754	699	607	509	394	226	187	106	10177	920	15-16
4/28, Mon	52	34	26	44	129	257	505	794	882	728	732	752	924	815	952	1006	1076	1116	872	641	423	320	202	151	13433	1116	17-18
4/29, Tue	68	33	29	48	118	251	473	790	859	713	654	694	719	757	744	916	983	1036	859						10744		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									AWDT		
	75	40	34	53	123	237	487	792	877	734	689	733	830	799	870	962	1045	1109	892	648	458	366	210	155	13216		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day
6	147	3	81	1109	8.4	663	9.6	534	8.4

ESTIMATED AADT Roadway	East	West
13005	6771	6234

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
4	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

STATION: 830074

New York State Department of Transportation

EB Traffic Count Hourly Report

ROUTE/ROAD:	NY300	FROM: RT 32		TO: RT 52		REGION-COUNTY:	8-ORANGE
FED DIR CODE:	3	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Newburgh-Town-0569
ST DIR CODE:	7	END MILEPOST:	7.01	FACTOR GROUP:	30	BIN:	3345000
DOT ID:	100268	LANES BY DIR:	1 East	CC STN:		RR CROSSING:	
BEGIN DATE:	4/23/2014	WEEK OF YEAR:	17	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:	SB TRAVEL LANE	PLACEMENT:	.768MI NORTH OF RT 52	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-KAJ	PROCESSED BY:	DOT-CEL	BATCH ID:	DOT-R8 Wk 17	SPEED LIMIT:	45

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
4/23, Wed																	**582**	**700**	**555**	**395**	**270**	**249**	**151**	**95**	2997		
4/24, Thu	**48**	**26**	**21**	**24**	**58**	**65**	**161**	**313**	**345**	**316**	**309**	**374**	**413**	**408**	**503**	**547**	**591**	**670**	**568**	**397**	**328**	**283**	**153**	**112**	7033	670	17-18
4/25, Fri	**56**	**33**	**14**	**27**	**40**	**67**	**140**	**302**	**339**	**312**	**341**	**359**	**443**	**483**	**543**	**596**	**662**	**646**	**539**	**439**	**377**	**318**	**204**	**146**	7426	662	16-17
4/26, Sat	**92**	**49**	**26**	**21**	**19**	**35**	**51**	**111**	**210**	**279**	**328**	**416**	**461**	**426**	**462**	**532**	**541**	**409**	**370**	**365**	**312**	**234**	**221**	**149**	6119	541	16-17
4/27, Sun	**129**	**50**	**20**	**17**	**14**	**22**	**60**	**72**	**166**	**260**	**298**	**376**	**422**	**446**	**425**	**496**	**410**	**382**	**353**	**297**	**252**	**137**	**116**	**74**	5294	496	15-16
4/28, Mon	**41**	**22**	**17**	**18**	**42**	**73**	**168**	**296**	**365**	**317**	**378**	**381**	**482**	**459**	**524**	**573**	**615**	**662**	**543**	**383**	**281**	**214**	**117**	**101**	7072	662	17-18
4/29, Tue	**41**	**18**	**15**	**25**	**43**	**81**	**146**	**294**	**321**	**311**	**293**	**330**	**377**	**400**	**403**	**508**	**569**	**620**	**534**						5329		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									**AWDT**		
	48	**26**	**17**	**25**	**47**	**71**	**154**	**301**	**343**	**314**	**330**	**361**	**424**	**422**	**477**	**543**	**589**	**663**	**550**	**392**	**293**	**249**	**140**	**103**	6881		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day	ESTIMATED AADT Roadway	East	West
6	147	3	81	1109	8.4	663	9.6	534	8.4	13005	6771	6234

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
4	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

STATION: 830074

New York State Department of Transportation
WB Traffic Count Hourly Report

ROUTE/ROAD:	NY300	FROM: RT 32		TO: RT 52		REGION-COUNTY:	8-ORANGE
FED DIR CODE:	7	REF. MARKER:		FUNC. CLASS:	16 - U Minor Arterial	MUNI:	Newburgh-Town-0569
ST DIR CODE:	7	END MILEPOST:	7.01	FACTOR GROUP:	30	BIN:	3345000
DOT ID:	100268	LANES BY DIR:	1 West	CC STN:		RR CROSSING:	
BEGIN DATE:	4/23/2014	WEEK OF YEAR:	17	ADDL DATA:	CLS SPD	HPMS SAMPLE:	
NOTES 1:	SB TRAVEL LANE	PLACEMENT:	.768MI NORTH OF RT 52	JURISDICTION:	01-NYSDOT	1 WAY CODE:	
NOTES 2:						COUNT TYPE:	Vehicle
TAKEN BY:	TST-KAJ	PROCESSED BY:	DOT-CEL	BATCH ID:	DOT-R8 Wk 17	SPEED LIMIT:	45

DATE	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	DAILY TOTAL	HIGH COUNT	HIGH HOUR
4/23, Wed																	479	443	356	255	134	117	58	50	1892		
4/24, Thu	25	15	18	25	82	164	353	492	535	429	340	363	435	417	412	416	469	472	358	255	218	128	67	57	6545	535	08-09
4/25, Fri	27	14	20	36	72	163	314	476	546	438	379	388	442	381	397	495	512	467	403	291	197	128	116	79	6781	546	08-09
4/26, Sat	38	28	26	21	18	73	130	229	316	387	399	497	445	445	389	384	357	308	369	242	139	132	83	71	5526	497	11-12
4/27, Sun	50	25	18	14	12	48	76	124	186	334	387	393	456	459	416	424	344	317	254	212	142	89	71	32	4883	459	13-14
4/28, Mon	11	12	9	26	87	184	337	498	517	411	354	371	442	356	428	433	461	454	329	258	142	106	85	50	6361	517	08-09
4/29, Tue	27	15	14	23	75	170	327	496	538	402	361	364	342	357	341	408	414	416	325						5415		
AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6 AM to Fri Noon)																									AWDT		
	26	15	17	28	76	166	333	491	534	420	359	372	406	377	394	419	456	446	342	256	165	117	70	52	6335		

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY Roadway High Hour	Roadway % of day	East High Hour	East % of day	West High Hour	West % of day
6	147	3	81	1109	8.4	663	9.6	534	8.4

ESTIMATED AADT Roadway	East	West
13005	6771	6234

FACTOR

Month	Seasonal	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Axl
4	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

TE-26X

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING & SAFETY DIVISION
TRAFFIC CONTROL SPECIFICATIONS

Study :
Contract : D259613
PIN: 8460.32.321
File : 33.33-32

O-34 SIGNAL NO(S) | ORANGE COUNTY

INTERSECTION RUTE 32 AT ROUTE 300

☐ CITY ☐ VILLAGE ☒ TOWN OF NEWBURGH

Department Order filed 9/26/69 as Section 2033.33 Subdivision (e)

Prior specifications hereby superseded ☐ None ☒ September 9, 1996

Purpose : REINSTALL TRAFFIC SIGNAL UNDER CONTRACT D259613.

These specifications will be effective upon the ☒ Installation ☐ Modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices

I. This Signal shall

A. Operate in accordance with the Table of Operations and / of Change Intervals as shown on page(s) 3 as a :

- ☐ Pretimed Signal
- ☐ Semi-traffic actuated signal
- ☒ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other

B.
- ☒ Display vehicular indications
- ☐ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian pushbuttons

as shown in the ☐ schematic ☒ scaled drawing on page 3

Be equipped with ☐ pre-emption ☐ interconnection and / or coordination which are described as follows

FILE SHOP CABINET

FINAL COPY

cc: ( ) ☐ Main Office
(1) ☒ Region 8 Traffic Engineer
(2) ☒ SIGNAL SHOP
( ) ☐ _____

10/11/05 D. Dillman / RRF RTE
Date Signature Title

Installation Date 10/11/05

Modification Date _____

FED. ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	D259613	67	70

ROUTE 32 AT ROUTE 300, TOWN OF NEWBURGH, ORANGE CO
S.H. 161 NEWBURGH - SHAWANGUNK
S.H. 8138 CRONOMER VALLEY - PLATTEKILL
S.H. 9454 CRONOMER VALLEY - GARDNERTOWN
P.I.N. 8460.32 | B.I.N.

TABLE OF SIGNS

LOC.	ITEM	MUTCD	TEXT
Ⓓ Ⓙ Ⓓ Ⓛ	680.8201	R3-22C	ONLY
Ⓚ	680.8201	R3-24C	ONLY
Ⓘ	680.8201	R3-23C	ONLY

TABLE OF POLES

POLE	STATION, OFFSET, SIDE	ELEV.	ITEM	HEIGHT	DESIGN LOAD	FOOTING MOMENT
1	N 1+331.5, 8.8m LT	128.5	680.605010	10 m	50 kN	478 kN-m
2	N 1+353.9, 10.4m RT	129.5	680.605009	9 m	50 kN	428 kN-m

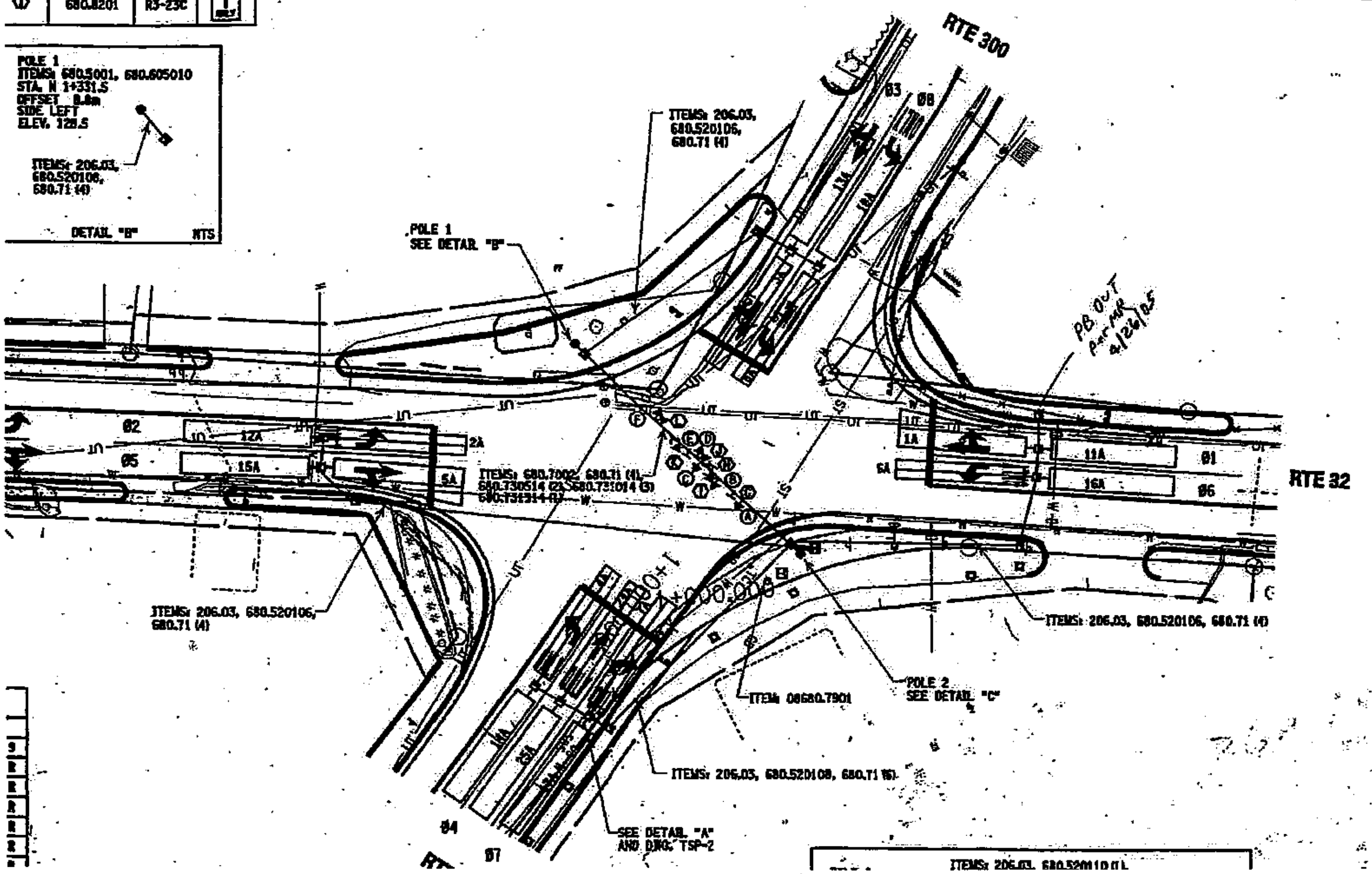
TABLE OF CLEARANCES

		FROM: G	G ↙	R ↙	R
TO	G	X	G/↙ / G	R/↙ / R	R / R
TO	G ↙	G / G	X	R/↙ / R/↙	R / R
TO	R ↙	Y / R	Y/↙ / R/↙	X	R / R
TO	R	Y / R	Y/↙ / R	R/↙ / R	X

POLE 1
ITEMS: 680.5001, 680.605010
STA. N 1+331.5
OFFSET 8.8m
SIDE LEFT
ELEV. 128.5

ITEMS: 206.03, 680.520106, 680.71 (4)

DETAIL "B" NTS



ITEMS: 206.03, 680.52011 ...

TE 46(3/91) STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS

STUDY:
CONTRACT:
PIN:
FILE:

43 SIGNAL NO(S). Orange COUNTY PAGE 1 OF 19 PAGES

INTERSECTION Route 52 at Route 300

☐ City, ☐ Village, ☒ Town of Newburgh

Department Order filed _____ (Date) as Section 2033.33 Subdivision (d)

Prior specifications hereby superceded: ☐ None ☒ June.3 19 87

Purpose: Install presence loop detection

These specifications will be effective upon the ☒ installation, ☐ modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices.

I. This Signal shall:

A. Operate in accordance with the Table of Operations and/or Change Intervals as shown on page(s) 2 as a:
- ☐ Pretimed signal
- ☐ Semi-traffic actuated signal
- ☒ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other _____

B.
- ☒ Display vehicular indications
- ☐ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian push buttons

as shown in the ☒ schematic, ☐ scaled drawing on page 3.

C. Be equipped with ☐ pre-emption, ☐ interconnection and/or coordination which are described as follows:

9-1-93 (Date) M. L. Mannara (Signature) RTE (Title)

cc:
- ☒ Main Office (2)
- ☒ Region 8 Traffic Engineer
- ☒ F. Haalck (3)
- ☒ M. Glover

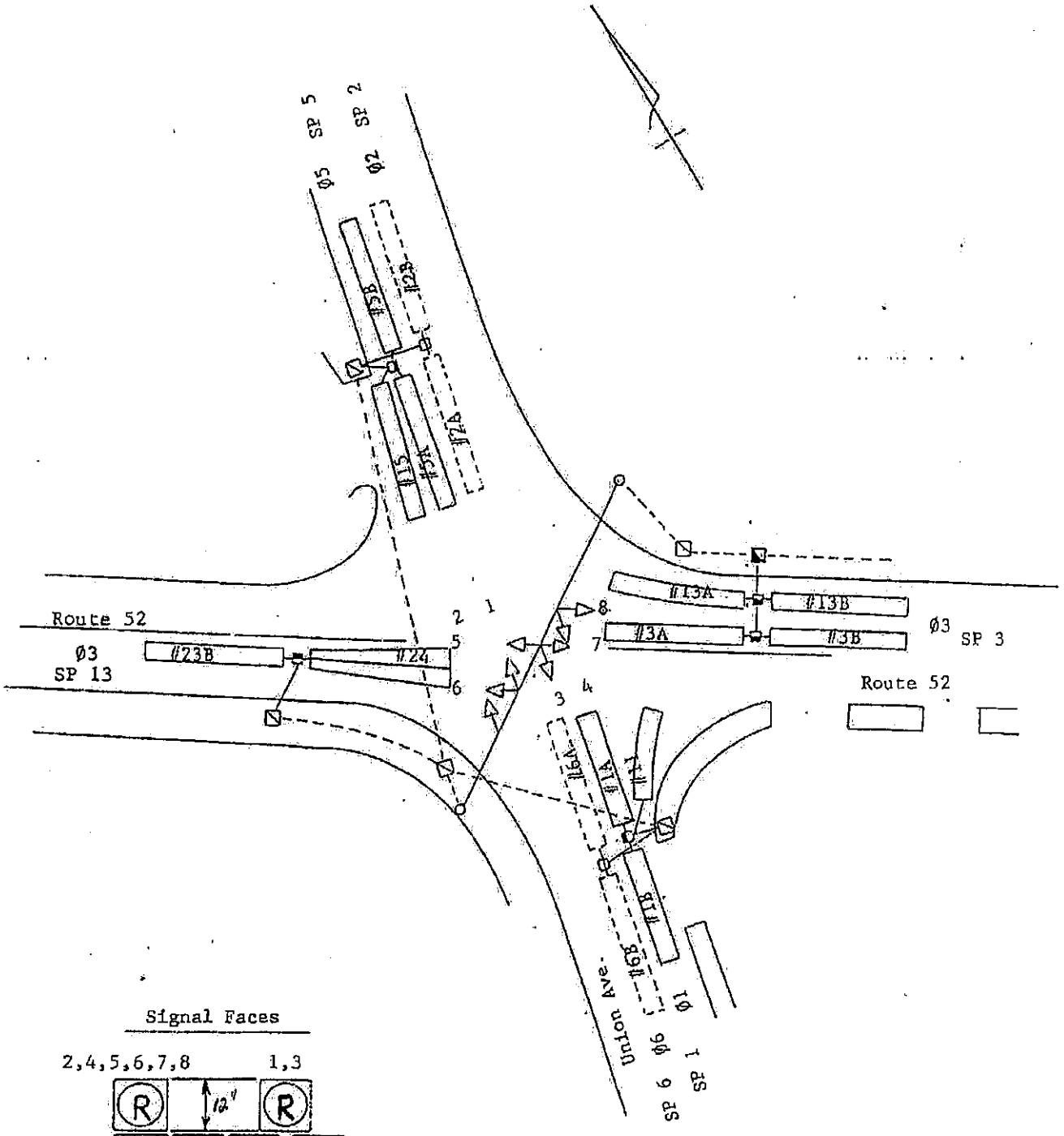
Installation Date _____

Modification Date 4-26-93

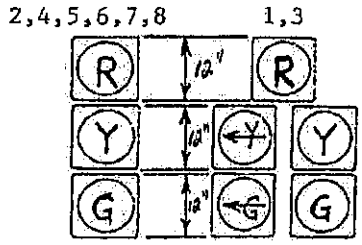
STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS (CONTINUED)

Study:
Contract:
PIN:
File:

43	Orange	4-26-93	PAGE 3 OF 19 PAGES
SIGNAL NO(S).	COUNTY	DATE	



Signal Faces



Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	2	2	2		2	2		
Gap, Ext	2	2	2		2	2		
Max 1	40	15	40		40	15		
Max 2								
Yel Clearance	4	4	4		4	4		
Red Clearance	1	1	1		1	1		
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable	On	On	On		On	On		
Min Recall	On				On			
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		On		On		On		On
Enable Simul Gap	On	On	On	On	On	On	On	On
Gaurantee Passag								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Options+ [1.1.3]

	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Gm/Ped Delay								

ID: 3043 RTE 52 @ UNION AVE (RTE 300)

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	4	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	4	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3			3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4			4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5			5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6			6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7			7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8			8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9			9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10			10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11			11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12			12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8
1	Coor	40	15	40		40	15		
2	Coor	60	15	40		60	15		
3	Coor								
4	Coor								
5	Coor								
6	Coor								
7	Coor								
8	Coor								
9	Coor								
10	Coor								
11	Coor								
12	Coor								

Split		1	2	3	4	5	6	7	8
13	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
14	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
15	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
16	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
17	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
18	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
19	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
20	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
21	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
22	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
23	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON
24	Coor	0	0	0	0	0	0	0	0
		NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

STD8

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	GREEN	On
2	1	RED	On
3	1	RED	On
4	1	RED	Off
5	2	GREEN	On
6	2	RED	On
7	2	RED	Off
8	2	RED	Off

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	FLOAT
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Split	OFF
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH OVER
Flash Yel	45
Flash Red	0

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	USER
Loc Fish Start	ON
Start Flash(s)	0
Start AllRed(s)	0
Yellow < 3*	OFF
Display Time	20
Red Revert	0
MCE Timeout	0
Feature Profile	0
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

09/26/17 Page 1

This page is left intentionally blank

THE POLO CLUB
SFEIS

Appendix G

Hydrant Flow Data

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

THE POLO CLUB
SFEIS

Appendix G1

2010 Hydrant Flow Data

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

INSURANCE SERVICES OFFICE, INC.

HYDRANT FLOW DATA SUMMARY

City Cronomer Valley Fd
County Orange State New York Witnessed by: Insurance Services Office, Inc. Date: August 12, 2010

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW - GPM $Q=(29.83(C(d^2)p^{0.5}))$ INDIVIDUAL HYDRANTS			TOTAL	PRESSURE PSI STATIC	RESID.	FLOW -AT 20 PSI NEEDED **	AVAIL.	REMARKS***
1	Comm	N. Plank Rd n/o Noel Dr	Town of Newburgh, Main system	1560	0	0	1560	120	114	2000	7100	
2	Comm	169 N. Plank Rd	Town of Newburgh, Main system	1690	0	0	1690	80	72	1250	5000	
3	Comm	N Plank Rd w/o flow hydrant	Town of Newburgh, Main system	1690	0	0	1690	48	38	1500	2900	
4	Comm	N Plank @ Wyants Ln	Town of Newburgh, Main system	1750	0	0	1750	40	36	3000	4200	
5	Comm	Rte 300 @ Chapel Rd	Town of Newburgh, Main system	1630	0	0	1630	26	19	2000	1500	
6	Comm	Cnty Rd 87 e/o Fostertown School	Town of Newburgh, Main system	1630	0	0	1630	62	57	2250	5100	
(7)	(Comm)	(Rte 300 @ Jeanne Dr)	(Town of Newburgh, Main system)	(1280)	(0)	(0)	(1280)	(48)	(42)	(4000)	(2900)	((A)-(3650 gpm))
(7.1)	(Comm)	(Rte 300 @ Jeanne Dr)	(Town of Newburgh, Main system)	(1280)	(0)	(0)	(1280)	(48)	(42)	(2500)	(2900)	
8	Comm	Plattekille Tpke @ Gardnertown School	Town of Newburgh, Main system	1750	0	0	1750	83	65	2250	3400	
9	Res	504 3rd St	Town of Newburgh, Main system	710	0	0	710	56	38	750	1000	
10	Res	North Fostertown Drive & Creek Rd	Town of Newburgh, Main system	1750	0	0	1750	36	30	750	3000	
11	Res	125 Dogwood Ln	Town of Newburgh, Main system	1050	0	0	1050	54	40	750	1700	
12	Comm	5020 9W	Town of Newburgh, Main system	1750	0	0	1750	143	125	3000	4900	
13	Comm	Rte 300 @ Rte 32	Town of Newburgh, Main system	1810	0	0	1810	50	44	1500	4300	

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR PROPERTY INSURANCE PREMIUM CALCULATIONS ONLY AND ARE *NOT* INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION.

THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

***Comm = Commercial; Res = Residential.**

****Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.**

***** (A)-Limited by available hydrants to gpm shown. Available facilities limit flow to gpm shown plus consumption for the needed duration of (B)-2 hours, (C)-3 hours or (D)-4 hours.**

THE POLO CLUB
SFEIS

Appendix G2

2020 Hydrant Flow Data

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

HYDRANT FLOW TESTING RESULTS

WO. NO.	DATE	SHEET
114.01	11/13/20	1 OF 1

PROJECT TITLE	MUNICIPALITY (C / V / T)	LOCATION
THE POLO CLUB		NYS ROUTE 300 AND JEANNE DRIVE

PERFORMED BY	WATER DISTRICT	REF DRAWING(S)
MDP	Name	DWG LAST REV. XX/XX/XX

HYDRANT TEST DATA

Hydrant Test #: 1 **Date:** 11/13/20 **Time:** 11:40 AM / PM

Residual Hydrant Location: Hydrant 2

Residual Hydrant Elevation: _____ feet **Vertical Datum:** _____

Flowing Hydrant Location: Hydrant 1

Flowing Hydrant Elevation: _____ feet **Vertical Datum:** _____

Aprox. Distance between Hydrants: 988 ± feet

Existing Water Main Size: [6"] 8" 10" 12" _____

RESULTS

Residual Hyd. Static Pressure (P_S):	49	PSI	=	113.1	Feet of Static Head
Residual Hyd. Flow Pressure (P_T):	45	PSI	=	103.8	Feet of Static Head
Flow Hydrant Measured Flow (Q_T):	880	GPM			
Calculated Flow @ 20psi:	2,565	GPM	=	$Q_T \times [(P_S - 20) / (P_S - P_T)]^{0.54}$	

HYDRANT TEST DATA

Hydrant Test #: 2 **Date:** 11/13/20 **Time:** 11:45 AM / PM

Residual Hydrant Location: Hydrant 3

Residual Hydrant Elevation: _____ feet **Vertical Datum:** _____

Flowing Hydrant Location: Hydrant 4

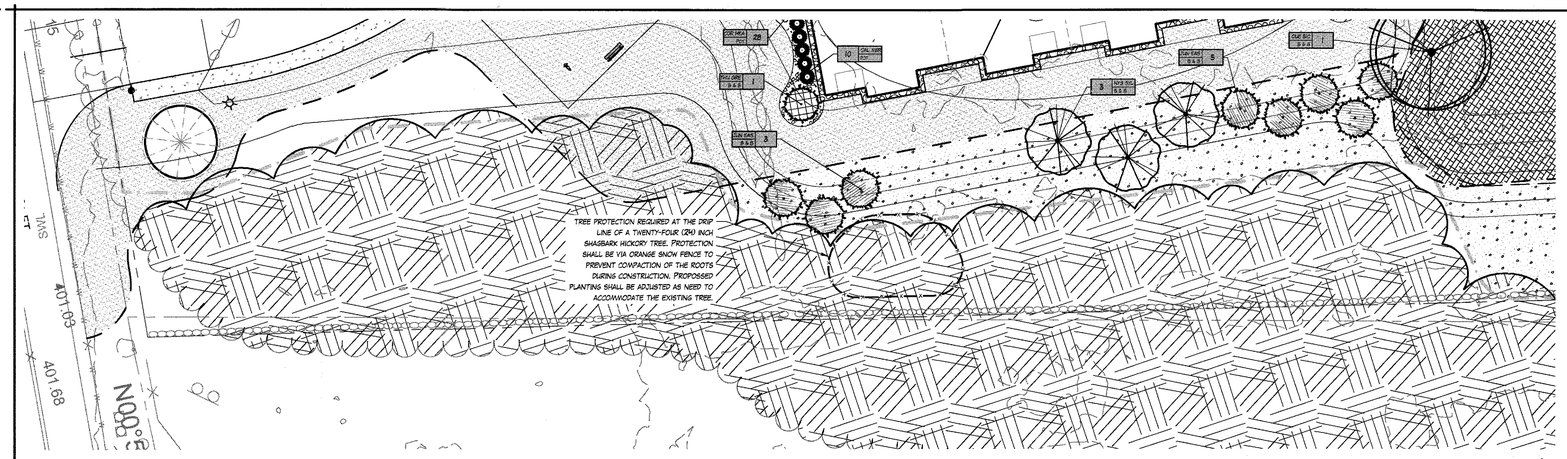
Flowing Hydrant Elevation: _____ feet **Vertical Datum:** _____

Aprox. Distance between Hydrants: 650 ± feet

Existing Water Main Size: 6" 8" 10" 12" [16"]

RESULTS

Residual Hyd. Static Pressure (P_S):	45	PSI	=	103.8	Feet of Static Head
Residual Hyd. Flow Pressure (P_T):	41	PSI	=	94.6	Feet of Static Head
Flow Hydrant Measured Flow (Q_T):	1,020	GPM			
Calculated Flow @ 20psi:	2,744	GPM	=	$Q_T \times [(P_S - 20) / (P_S - P_T)]^{0.54}$	



1 PLANTING PLAN DETAIL "G"

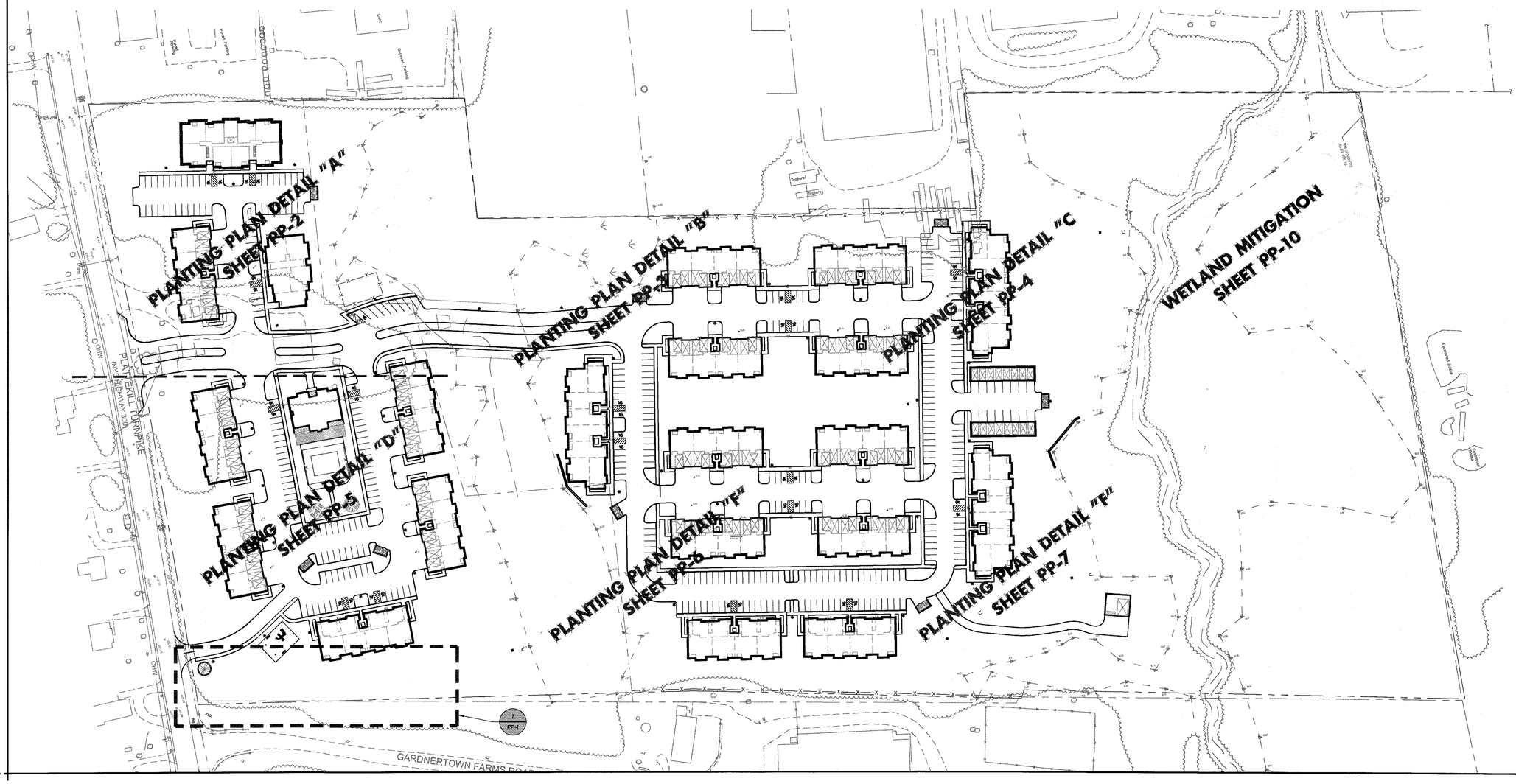
SCALE: 1" = 20'

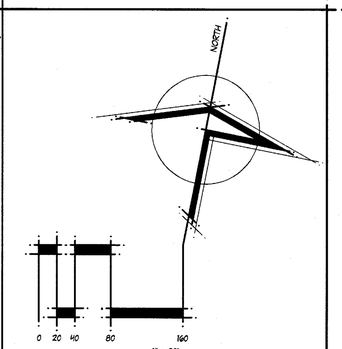
GENERAL NOTES:

SYMBOL	DESCRIPTION
GE-101	EXISTING CONDITIONS ARE BASED OFF SURVEY DATA PROVIDED TO LANDARCH STUDIOS, P.L.L.C. FROM ENGINEERING AND SURVEYING PROPERTIES PC, 71 CLINTON STREET, MONTGOMERY, NEW YORK 12549.
GE-102	PROPOSED CONDITIONS ARE BASED OFF CIVIL DATA PROVIDED TO LANDARCH STUDIOS, P.L.L.C. FROM ENGINEERING AND SURVEYING PROPERTIES PC, 71 CLINTON STREET, MONTGOMERY, NEW YORK 12549. THE RESPECTIVE CIVIL DRAWINGS SHALL BE REFERENCE FOR RELATED ITEMS.

SHEET INDEX

SHEET	DESCRIPTION
PP-1	PLANTING PLAN KEY
PP-2	DETAIL PLANTING PLAN "A"
PP-3	PLANTING PLAN DETAIL "B"
PP-4	PLANTING PLAN DETAIL "C"
PP-5	PLANTING PLAN DETAIL "D"
PP-6	PLANTING PLAN DETAIL "E"
PP-7	PLANTING PLAN DETAIL "F"
PP-8	PLANTING PLAN DETAILS
PP-9	PLANTING PLAN NOTES
PP-10	WETLAND MITIGATION PLAN





DRAWING STATUS	ISSUE DATE: NOVEMBER 11, 2020
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET No.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	OF
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8656
MAIL US: 368 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
EMAIL US: INFO@LANDARCHSTUDIOS.COM
FOLLOW US: @LANDARCHSTUDIOS
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN KEY

SHEET TITLE:

CAD REFERENCE:	SHEET NO.:
OVERALLPLANTINGPLAN.DWG	PP-1
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.

PERMANENT TURF SEEDING (19,775 SF)
(2,966 SF) FESTUCA RUBRA FALLAX
(12,854 SF) FESTUCA RUBRA RUBRA
(3,955 SF) LOLIUM PERENNE

APPROXIMATE PROPOSED TREELINE, TYP.
CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

SPADE DUG PLANTING BED EDGE, TYP.
8 / PP-8

DECORATIVE STONE BUFFER, TYP.
1 / PP-8

TREE PROTECTION REQUIRED AT THE DRIP LINE OF TRIPLE SPRUCE TREE. PROTECTION SHALL BE VIA ORANGE SNOW FENCE TO PREVENT COMPACTION OF THE ROOTS DURING CONSTRUCTION. PROPOSED PLANTING SHALL BE ADJUSTED AS NEED TO ACCOMMODATE THE EXISTING TREE.

SPADE DUG PLANTING BED EDGE, TYP.
8 / PP-8

DECORATIVE STONE BUFFER, TYP.
1 / PP-8

APPROXIMATE PROPOSED TREELINE, TYP.
CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

SPADE DUG PLANTING BED EDGE, TYP.
8 / PP-8

DECORATIVE STONE BUFFER, TYP.
1 / PP-8

DECORATIVE STONE BUFFER, TYP.
1 / PP-8

NORTH

0 5 10 20 40
1" = 20'
ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: November 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET NO.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	7 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE

CALL US: (845) 476 - 8656
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
E-MAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN
PLANTING DETAIL "A"

SHEET TITLE:

CAD REFERENCE: OVERALLPLANTINGPLAN.DWG

SHEET NO.: PP-2

PROJECT NUMBER: 2020.01

DRAWN/CHECKED BY: C.M.W. / C.M.W.

LICENSED LANDSCAPE ARCHITECT
CHAD M. WADE
002206
STATE OF NEW YORK
LANDSCAPE ARCHITECTURAL SEAL

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

10

12

9

DECORATIVE STONE BUFFER, TYP. 1 PP-8

SPADE DUG PLANTING BED EDGE, TYP. 8 PP-8

STOP

HC

NP

C.O.

NORTH

0 5 10 20 40

1" = 20'

ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET NO.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	3 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8656
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN DETAIL "B"

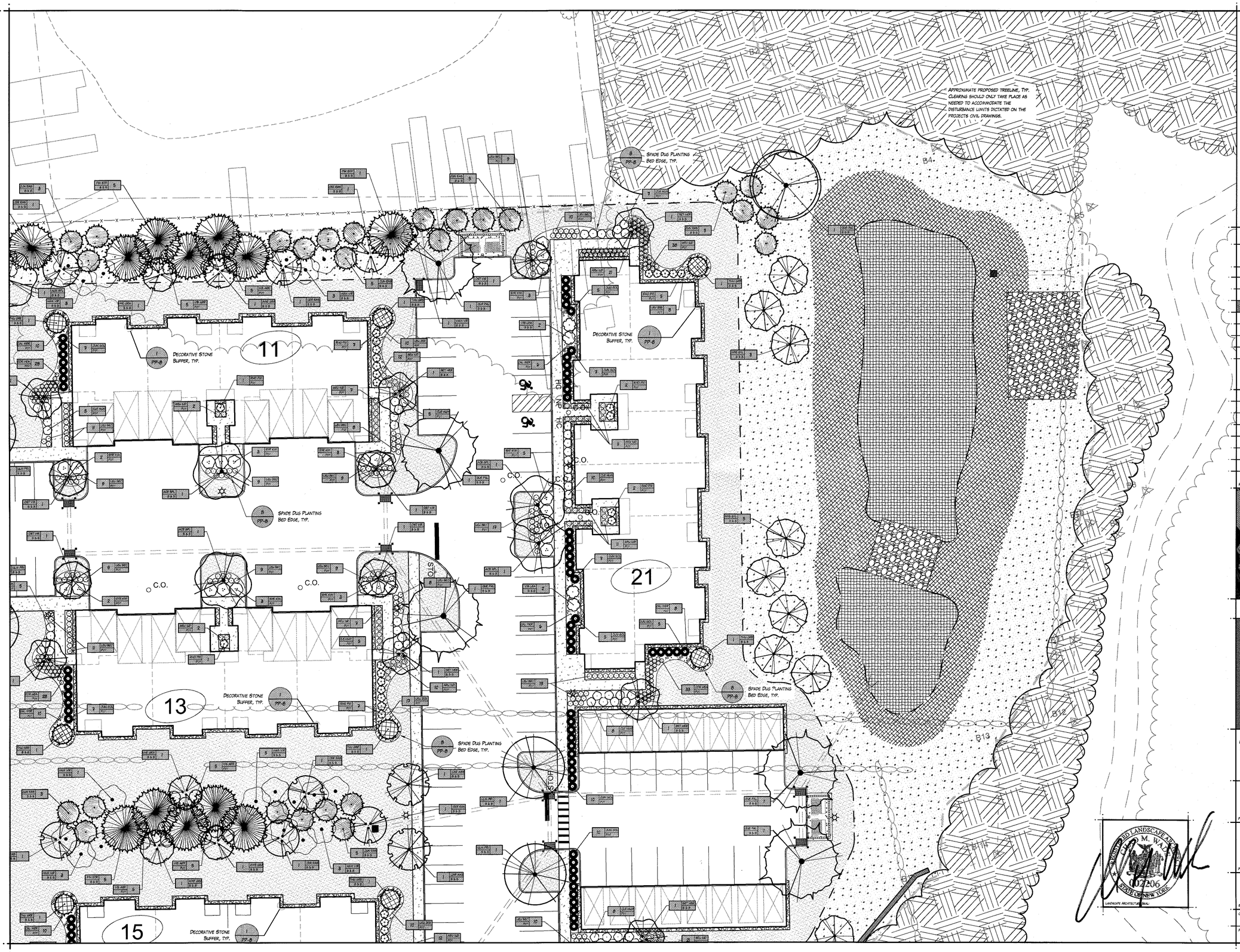
SHEET TITLE:

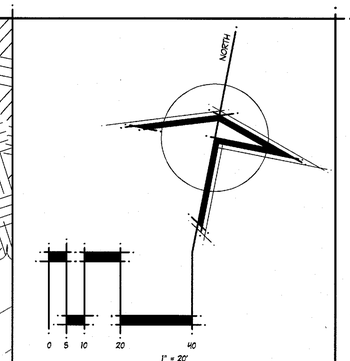
CAD REFERENCE: OVERALLPLANTINGPLAN.DWG

SHEET NO.: PP-3

PROJECT NUMBER: 2020.01

DRAWN/CHECKED BY: C.M.W. / C.M.W.





ONLY ON 24" X 36" PAGE

DRAWING STATUS	ISSUE DATE: NOVEMBER 11, 2020
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET No.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	4 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8866
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN DETAIL "C"

SHEET TITLE:

CAD REFERENCE:	SHEET NO.:
OVERALLPLANTINGPLAN.DWG	PP-4
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.

TREE PROTECTION REQUIRED AT THE DRIP LINE OF A TWELVE (12) INCH MAPLE TREE. PROTECTION SHALL BE VIA ORANGE SNOW FENCE TO PREVENT COMPACTION OF THE ROOTS DURING CONSTRUCTION. PROPOSSED PLANTING SHALL BE ADJUSTED AS NEED TO ACCOMMODATE THE EXISTING TREE.

DECORATIVE STONE BUFFER, TYP. (1 / PP-8)

SPADE DUG PLANTING BED EDGE, TYP. (8 / PP-8)

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

NORTH

0 5 10 20 40

1" = 20'
ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR — SHEET NO.

CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	8 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN
DATE	DESCRIPTION

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8686
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 868 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN DETAIL "D"

SHEET TITLE:

CAD REFERENCE: OVERALLPLANTINGPLAN.DWG	SHEET NO.: PP-5
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.

LICENSED LANDSCAPE ARCHITECT
CHAD M. WADE
002206
STATE OF NEW YORK
LANDSCAPE ARCHITECT SEAL

LICENSED LANDSCAPE ARCHITECT
CHAD M. WADE
002206
STATE OF NEW YORK
LANDSCAPE ARCHITECTURAL SEAL

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS PICTATED ON THE PROJECTS CIVIL DRAWINGS.

8 PP-8 SPADE DUG PLANTING BED EDGE, TYP.

1 PP-8 DECORATIVE STONE BUFFER, TYP.

14 15 16 17 18 19

C.O. HC NP STOP

NORTH

0 5 10 20 40

1" = 20'
ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET NO.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	6 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE

CALL US: (845) 476 - 8656
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VISIT US: WWW.LANDARCHSTUDIOS.COM
E-MAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN
DETAIL "E"

SHEET TITLE:

CAD REFERENCE:		SHEET NO.:
OVERALLPLANTINGPLAN.DWG		PP-6
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.	

DECORATIVE STONE BUFFER, TYP. 1 PP-8

DECORATIVE STONE BUFFER, TYP. 1 PP-8

DECORATIVE STONE BUFFER, TYP. 1 PP-8

DECORATIVE STONE BUFFER, TYP. 1 PP-8

17

20

C.O.

HC

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

TREE PROTECTION REQUIRED AT THE DRIP LINE OF A SIX (6) INCH SHAGBARK HICKORY TREE. PROTECTION SHALL BE VIA ORANGE SNOW FENCE TO PREVENT COMPACTION OF THE ROOTS DURING CONSTRUCTION. PROPOSED PLANTING SHALL BE ADJUSTED AS NEED TO ACCOMMODATE THE EXISTING TREE.

APPROXIMATE PROPOSED TREELINE, TYP. CLEARING SHOULD ONLY TAKE PLACE AS NEEDED TO ACCOMMODATE THE DISTURBANCE LIMITS DICTATED ON THE PROJECTS CIVIL DRAWINGS.

TREE PROTECTION REQUIRED AT THE DRIP LINE OF A TWELVE (12) INCH SHAGBARK HICKORY TREE. PROTECTION SHALL BE VIA ORANGE SNOW FENCE TO PREVENT COMPACTION OF THE ROOTS DURING CONSTRUCTION. PROPOSED PLANTING SHALL BE ADJUSTED AS NEED TO ACCOMMODATE THE EXISTING TREE.

NORTH

0 5 10 20 40

1" = 20'

ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET No.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	7 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8686
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD W. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

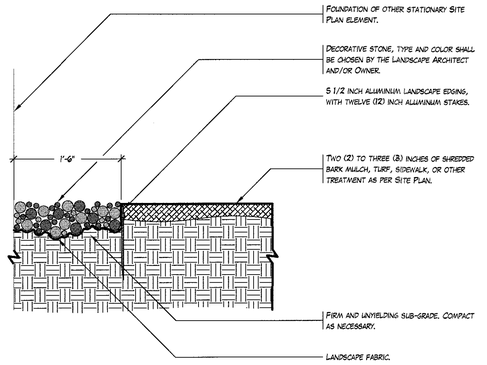
MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN DETAIL "F"

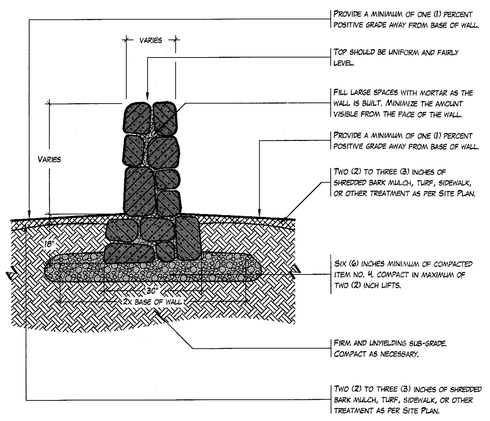
SHEET TITLE:

CAD REFERENCE:	SHEET NO.:
OVERALLPLANTINGPLAN.DWG	PP-7
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.



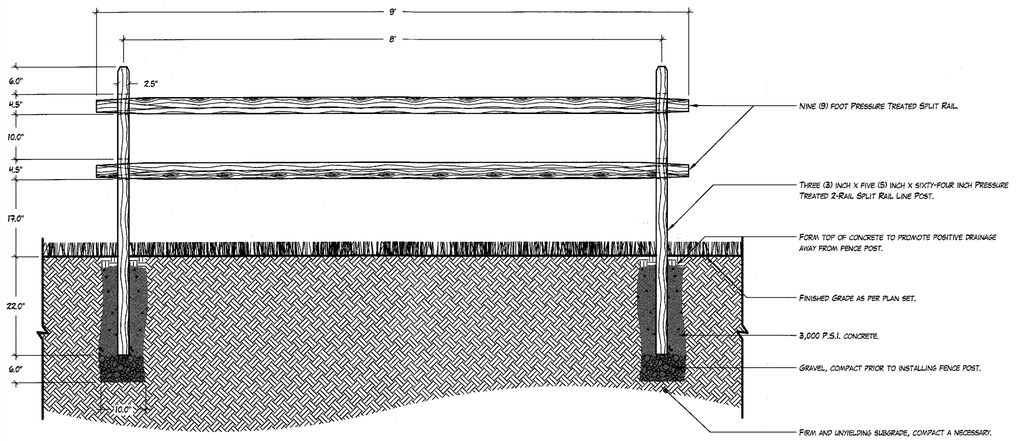
1 STONE BUFFER

SCALE 1" - 1'-0"



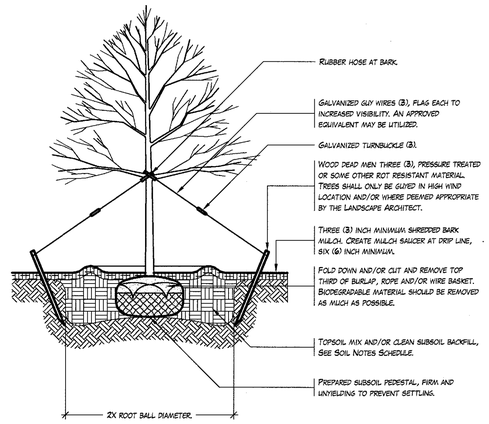
2 INTERNALLY MORTARED STONE WALL/COLUMN

SCALE: 1/2" = 1'



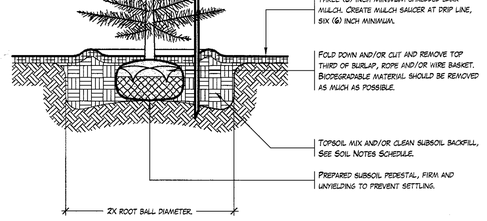
3 TWO RAIL SPLIT RAIL FENCE

3/4" = 1' - 0"



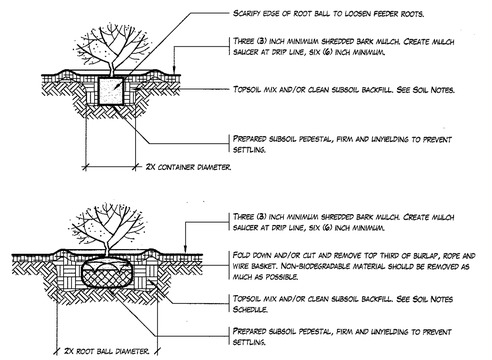
4 DECIDUOUS TREE PLANTING AND GUYING

SCALE: 3/8" = 1'-0"



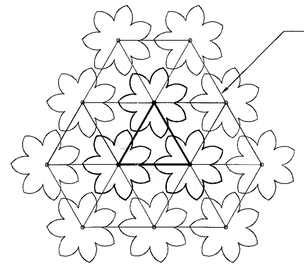
5 EVERGREEN TREE PLANTING AND GUYING

SCALE: 3/8" = 1'-0"



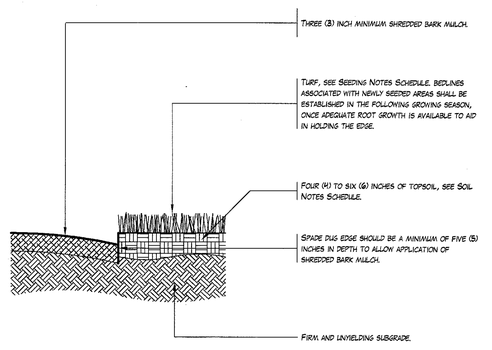
6 CONTAINER AND B&B SHRUB PLANTING

SCALE: 3/8" = 1'-0"



7 PLANT SPACING

SCALE: 1/2" = 1'-0"



8 SPADE DUG PLANTING BED EDGE

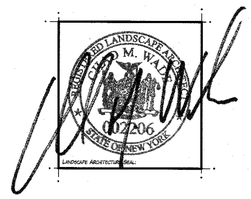
SCALE: 1" = 1'-0"

811

Know what's below.
Call before you dig.

NOTIFY 811 AT LEAST FORTY-EIGHT (48) HOURS, EXCLUDING THE DAY OF THE NOTIFICATION, BEFORE ANY GROUND DISTURBANCE AND HAVE THE UNDERGROUND UTILITIES MARKED OUT. WAIT FOR THE AFFECTED UTILITY OPERATORS TO RESPOND, AND THEN CONFIRM THE UTILITIES HAVE BEEN ACCURATELY LOCATED. RESPECT THE IDENTIFIED LOCATIONS AND DIG ACCORDINGLY, TAKING PRECAUTIONS, ESPECIALLY WITHIN THE KNOWN TOLERANCE ZONE. IN THE EVENT MARK OUTS CANNOT BE MAINTAINED AND/OR GROUND DISTURBANCE CONTINUES LONGER THAN TEN (10) DAYS, NOTIFY 811 AND REQUEST A REMARK.

9 DIG SAFELY NEW YORK



DRAWING STATUS	ISSUE DATE: NOVEMBER 11, 2020
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET No.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	8 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
08/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 478 - 8696
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

PLANTING PLAN
DETAILS AND NOTES

SHEET TITLE:

CAD REFERENCE:	SHEET NO.:
OVERALLPLANTINGPLAN.DWG	**PP-8**
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.

PLANTING NOTES:

SYMBOL	DESCRIPTION	DETAIL
PN-101	PLANT SPECIES AND LOCATIONS ARE DEPICTED BASED UPON EXPECTED MICRO-CLIMATE. LOCATIONS CAN BE FIELD ADJUSTED AND/OR EXPANDED AS DEEMED NECESSARY. CONTRACTOR SHALL PAY CAREFUL ATTENTION TO THE SPECIES AS INDICATED BY ITS BOTANICAL NAME. EACH SPECIES HAS BEEN CAREFULLY SELECTED FOR ITS KNOWN RESISTANCE TO DEER, SALT TOLERANCE, AMONG OTHER VARIABLES AND ARE AVAILABLE FROM NATIONAL GROWERS. SUBSTITUTIONS ON VARIETIES ARE NOT TO BE IMPLEMENTED WITHOUT PRIOR CONSENT FROM THE LANDSCAPE ARCHITECT.	
PN-102	ALL PLANT MATERIAL WITHIN THE EXISTING LANDSCAPE SHOULD BE UTILIZED TO SATISFY THE QUANTITIES LISTED IN THE PLANT SCHEDULE FIRST PRIOR TO IMPORTING NEW PLANT STOCK. ALL PLANT MATERIAL FURNISHED IN ACCORDANCE WITH THIS PLAN SET SHALL MEET OR EXCEED THE MINIMUM STANDARDS WITHIN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. PLANT MATERIAL NOT IN COMPLIANCE WITH THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK WILL NOT AND SHALL NOT BE ACCEPTED BY THE PROJECT OWNER, LANDSCAPE ARCHITECT, AND/OR MUNICIPAL OFFICIAL.	
PN-103	ALL PLANT MATERIAL SHALL BE GUARANTEED UNDER A WARRANTY PERIOD FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE. ALL PLANT MATERIAL DEEMED UNSATISFACTORY MUST BE REPLACED IN THE SAME PLANTING SEASON DEEMED UNACCEPTABLE. PLANT MATERIAL SHALL BE REPLACED WITH NEW PLANTS, OF APPROXIMATE EQUAL SIZE AND NO SMALLER THAN ORIGINALLY SPECIFIED ON THE APPROVED PLAN SETS, AT THE NEXT APPROPRIATE PLANTING PERIOD.	
PN-104	CERTAIN SPECIES OF TREES HAVE A HIGH RISK OF FAILURE WHEN FIELD DUG AND PLANTED DURING THE FALL PLANTING SEASON. THE FOLLOWING SPECIES ARE KNOWN AS FALL PLANTING-ING HAZARD; BETULA AND QUERCUS. THE NURSERY STOCK FOR THE AFOREMENTIONED SPECIES SHALL BE SUPPLIED FROM THOSE DUG DURING THE PREVIOUS SPRING PLANTING SEASON AND HELD OVER THE SUMMER SEASON AS BALLED AND BUR-LAPPED.	
PN-105	CONTRACTOR SHALL DISCUSS WITH THE LANDSCAPE ARCHITECT THE NEED TO FIELD STAKE THE LOCATIONS OF ALL PLANT MATERIAL PRIOR TO INITIATING INSTALLATION FOR THE REVIEW AND APPROVAL.	
PN-106	CALL BEFORE YOU DIG. CALL 811 FORTY-EIGHT (48) HOURS BEFORE EVERY DIGGING JOB AND GET THE UNDERGROUND UTILITY LINES MARKED FOR FREE AND HELP PREVENT UNDESIRED CONSEQUENCES.	
PN-107	THE CONTRACTOR SHALL FIELD ADJUST THE LOCATIONS OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO ALL EXISTING UNDERGROUND UTILITIES AND/OR EXISTING ABOVE GROUND ELEMENTS. ALL CHANGES REQUIRED SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT AND/OR OWNER.	
PN-108	TYPICALLY, PERENNIALS, GRASSES, GROUNDCOVER, AND ANNUAL PLANTINGS ARE SHOWN AS MASS PLANTINGS. PLANTS SHALL BE PLACED ON A STAGGERED TRIANGULAR SPACING CONFIGURATION, SEE DETAIL. PLANT CENTER TO CENTER, ON CENTER DIMENSIONS ARE LISTED AS APPROPRIATE WITHIN THE PLANT SCHEDULE.	5/PP-8
PN-109	AREAS PLANTED WITH PERENNIALS SHALL BE SUPPLEMENTED, UPON REQUEST OF THE OWNER, WITH SPRING FLOWERING BULBS CONSISTENT WITH THE MICRO-CLIMATE OF THE AREAS DEPICTED. ADDITIONALLY, FALL FLOWER MUMS OR OTHER APPROPRIATE MATERIAL MAY BE SUPPLEMENTED UPON THE REQUEST OF THE OWNER.	
PN-110	SPRING PLANTING SHOULD TAKE PLACE BETWEEN MARCH 15TH AND JUNE 15TH. FALL PLANTING SHOULD TAKE PLACE BETWEEN SEPTEMBER 1ST AND OCTOBER 30TH. AVOID PLANTING OUTSIDE THE AFOREMENTIONED DATES, ESPECIALLY IN THE HEAT OF SUMMER, UNLESS PROPER IRRIGATION AND MONITORING IS IMPLEMENTED TO ENSURE HEALTH AND VIGOR OF PLANT MATERIAL.	
PN-111	EACH PLANT SHALL BE FERTILIZED WITH A PREMIUM GENERAL PURPOSE PHOSPHORUS FREE ORGANIC FERTILIZER; WHEN APPROPRIATE DURING THE NEXT FOLLOWING PLANTING SEASON. AS OF JANUARY 1, 2012 THE NYSDEC RESTRICTS THE USE OF PHOSPHORUS FERTILIZER ON LAWNS OR NON-AGRICULTURAL TURF. IT IS RECOMMENDED THAT A SOIL TEST BE CONDUCTED IN ORDER TO ENSURE THE USE OF AN APPROPRIATE FERTILIZER. ADDITIONALLY, NO FERTILIZER SHOULD BE APPLIED WITHIN TWENTY (2) FEET OF A WATER BODY OR ON PAVED SURFACES. APPLICATION RATE SHALL BE IN ACCORDANCE TO MANUFACTURES RECOMMENDATIONS AND SHOULD BE APPLIED IN THE FOLLOWING SPRING PLANTING SEASON. PLANTS SHOULD NOT BE FERTILIZED IN THE SAME YEAR THEY ARE PLANTED IN ORDER TO ALLOW NEW ROOT GROWTH.	
PN-112	THE CROWN OF ROOT BALL SHALL BEAR A SIMILAR RELATIONSHIP, OR SLIGHTLY ABOVE, FINISHED GRADE AS IT BORE TO PREVIOUS GRADE. PLACE ON SUBSOIL PEDESTAL IN ACCORDANCE WITH THE PLANTING DETAILS.	
PN-113	REMOVED ANY DEAD OR BROKEN BRANCHES AND THIN AS NEEDED UP TO A 1/3 OF EXISTING PLANT STRUCTURE, RETAINING ORIGINAL SHAPE.	
PN-114	SPADE CUT EDGE, SEE DETAIL. TIE INTO EXISTING BEDLINES WHERE APPROPRIATE.	6/PP-8
PN-115	NATURAL OR DYED BROWN SHREDDED BARK MULCH SHOULD BE APPLIED TO ALL PLANTING BEDS TO AN APPROXIMATE DEPTH OF THREE (3) INCHES. INDIVIDUAL TREES WITHIN LAWN AREAS SHOULD, ALTHOUGH NOT DEPICTED IN THE PLANS, HAVE A MINIMUM THREE (3) FOOT DIAMETER, PREFERABLE FIVE (5) FOOT DIAMETER MULCH RING CONSISTEN WITH A SPADE DUG EDGE NOTED IN PN-115.	

SOIL NOTES:

SYMBOL	DESCRIPTION
SN-101	TOPSOIL SHOULD BE STRIPED AND STOCKPILED WITH APPROPRIATE EROSION CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. STOCKPILED TOPSOIL IS TO BE UTILIZED FIRST PRIOR TO IMPORTING ADDITIONAL TOPSOIL.
SN-102	IMPORTED TOPSOIL, IF NEEDED, SHALL BE CONSISTENT WITH A LOAM OR SILT LOAM MIX, CONTAINING LESS THAN FIFTEEN (15) PERCENT CLAY AND CONTAIN A MINIMUM OF SIX (6) PERCENT BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATTER AND A MAXIMUM OF TWENTY (20) PERCENT. THE MIXTURE SHOULD BE OF AN ACCEPTABLE GRADATION OF NO MORE THAN TWENTY (20) PERCENT FINE TEXTURED MATERIAL, PASSING THE NO. 200 SIEVE.

STORMWATER PLANTING NOTES:

SYMBOL	DESCRIPTION
SW-101	THOSE AREAS REPRESENTED BY HATCH PATTERNS SHALL CONSIST OF A MIX OF HERBACEOUS PLANT MATERIAL. THESE AREAS SHALL BE PLANTED VIA SEED. SEED SHALL BE APPLIED VIA A HYDRO-SEEDING PROCESS IN ACCORDANCE WITH THE SEEDING SHEDULE AND SEEDING NOTES.
SW-102	THE PROPOSED ZONES ARE DEVELOPED BASED UPON ESTIMATED INUNDATION RELATED TO THE SWPPP. AN OVERLAP OF SPECIES FROM ONE ZONE TO THE NEXT SHOULD BE IMPLEMENTED AND WILL NOT EXCEED APPROXIMATELY FIVE (5) FEET, ALLOWING FOR INTEGRATION BETWEEN THE INDIVIDUAL ZONES.
SW-103	PLANTING OF THE PERMANENT POOL WILL COMMENCE AFTER FINAL CONSTRUCTION ACTIVITIES. THE PERMANENT POOL SHOULD BE FILLED WITH A MAXIMUM OF SIX (6) INCHES OF WATER AND ALLOWED TO THOROUGHLY SOAK. THE SIX (6) INCH DEPTH SHOULD BE MAINTAINED TO ALLOW TRANSFER OF OXYGEN TO THE ROOTS, DEPTH OF WATER SHOULD SLOWLY RAISE AS PLANTING ARE ESTABLISHED.
SW-104	PLANTING OF STORMWATER AREAS SHALL TAKE PLACE IN THE SPRING, BETWEEN MARCH 15 AND JUNE 15TH. IN THE EVENT THAT PLANTING TAKES PLACE IN THE EARLY FALL, ANNUAL RYEGRASS SHALL BE ADED TO THE SEED MIX IN ORDER TO PROVIDE STABILIZATION. APPLICATION OF THE ANNUAL RYEGRASS SHOULD BE AT A RATE OF THREE (3) POUNDS PER 1,000 SQ. FT.

SEEDING NOTES:

SYMBOL	DESCRIPTION
SE-101	THE SOIL SURFACE FROM ROUGH GRADING OF CONSTRUCTED SLOPES, WHERE SEED IS TO BE APPLIED, SHALL BE LOOSENED BY MECHANICAL RAKES PRIOR TO THE APPLICATION OF TOPSOIL. TOPSOIL SHALL BE SPREAD TO A COMPACTED UNIFORM MINIMUM THICKNESS OF FOUR (4) INCHES. TOPSOIL SURFACE SHALL BE FINELY GRADED AND LOOSENED BY MECHANICAL RAKES, AS NEEDED TO ENSURE SEED ACCEPTANCE AND SEED TO SOIL CONTACT.
SE-102	AREAS TO BE PLANTED WITH SEED MIXTURES ARE TO BE APPLIED THROUGH A HYDRO-SEEDING PROCESS TO ENSURE SLOPE STABILIZATION DURING THE ESTABLISHMENT PERIOD. SMALLER AREAS WHERE HYDRO-SEEDING MAY BE IMPRACTICAL SHALL HAVE A LIGHT LAYER OF STRAW MULCH APPLIED IN ORDER TO HELP MAINTAIN MOISTURE CONTENT. THE USE OF HAY IS PROHIBITED TO LIMIT POTENTIAL INTRODUCTION OF WEED SEEDS.
SE-105	SEEDED AREAS SHALL BE FERTILIZED WITH A PREMIUM GENERAL PURPOSE PHOSPHORUS FREE ORGANIC FERTILIZER AS NEEDED. AS OF JANUARY 1, 2012 THE NYSDEC RESTRICTS THE USE OF PHOSPHORUS FERTILIZER ON LAWNS OR NON-AGRICULTURAL TURF. IT IS RECOMMENDED THAT A SOIL TEST BE CONDUCTED IN ORDER TO ENSURE THE USE OF AN APPROPRIATE FERTILIZER. ADDITIONALLY, NO FERTILIZER SHOULD BE APPLIED WITHIN TWENTY (2) FEET OF A WATER BODY OR ON PAVED SURFACES. APPLICATION RATE SHALL BE IN ACCORDANCE TO MANUFACTURES RECOMMENDATIONS AND SHOULD BE APPLIED IN THE FOLLOWING SPRING PLANTING SEASON.

MAINTENANCE NOTES:

SYMBOL	DESCRIPTION
MN-101	IRRIGATE PLANT MATERIALS DAILY FOR TWO (2) WEEKS WITH TWO (2) TO THREE (3) GALLONS OF WATER PER ONE (1) INCH OF TRUNK SIZE OR ONE (1) GALLON PER SHRUB/PERENNIAL. THEN IRRIGATE MINIMUM TWO (2) TIMES A WEEK UNTIL WELL ESTABLISHED. USE APPROPRIATE JUDGMENT DEPENDENT UPON PRECIPITATION RATES.
MN-102	ALL PLANTINGS SHOWN ON THE APPROVED PLAN SET SHALL BE MAINTAINED IN A VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF USE AND PLANTS NOT SO MAINTAINED ARE TO BE REPLACED WITH NEW PLANTS, OF APPROXIMATE EQUAL SIZE AND NO SMALLER THAN ORIGINALLY SPECIFIED ON THE APPROVED PLAN SETS, AT THE NEXT APPROPRIATE PLANTING PERIOD.
MN-103	THE SHRUBS INDICATED WITHIN THE PLANT LIST ARE VARIETIES THAT HAVE BEEN CHOSEN TO FIT THEIR PROPOSED LOCATIONS. SHRUBS SHALL BE ALLOWED TO MATURE AND FILL PLANTING AREAS AS DESIGNED. PRUNING SHOULD BE MINIMAL AND ON AN AS-NEEDED BASIS TO MAINTAIN THE SHRUBS NATURAL APPEARANCE. SHEARING OF SHRUBS SHALL BE PROHIBITED.
MN-104	GROUNDCOVERS SHALL BE ALLOWED TO MATURE AND FILL PLANTING AREAS AS DESIGNED. PRUNING SHOULD BE MINIMAL AND ON AN AS-NEEDED BASIS TO MAINTAIN THE PLANTS NATURAL APPEARANCE. THE AREAS OF GROUNDCOVERS SHALL BE KEPT FREE OF WEEDS AND GRASS.
MN-105	PERENNIALS AND GRASSES SHOULD BE DEAD HEADED AS NEEDED THROUGHOUT THE SEASON TO MAINTAIN A NEAT APPEARANCE AND ENCOURAGE FLOWERING. THE AREAS OF PERENNIALS AND GRASSES SHALL BE KEPT FREE OF WEEDS AND GRASS.
MN-106	THE TREES INDICATED WITHIN THE PLANT LIST ARE VARIETIES THAT HAVE BEEN CHOSEN TO FIT THEIR PROPOSED LOCATIONS. TREES SHALL BE ALLOWED TO MATURE AND FULL CANOPIES ARE DESIRED. PRUNING SHOULD BE MINIMAL AND DONE FOR SAFETY, HEALTH OR STRUCTURAL CLEARANCE, REMOVE CROSSING AND DAMAGED BRANCHES. NO TREES SHALL BE TOPPED.
MN-107	A MINIMUM OF THREE (3) THICKNESS OF ORGANIC NATURAL OR DYED BROWN SHREDDED BARK MULCH SHALL BE MAINTAINED, REPLENISH AS NEEDED. KEEP MULCH AWAY FROM PLANT STEMS AND TREE COLLARS. EDGE THE BEDS PERIODICALLY TO MAINTAIN A NEAT APPEARANCE AT THE EDGE OF THE TURF.
MN-108	TURF SHOULD BE MAINTAIN AT APPROXIMATELY THREE (3) INCHES IN HEIGHT, NO LESS. USE MULCHING BLADES ON MOWERS TO ALLOW CLIPPINGS TO REMAIN, DECOMPOSE AND ADD NUTRIENTS TO THE SOIL. IT IS RECOMMENDED TO AERATE TURF ONCE A YEAR IN THE FALL WITH AERATION EQUIPMENT THAT PRODUCES PLUGS.
MN-109	SEEDED AREAS SHALL BE FERTILIZED WITH A PREMIUM GENERAL PURPOSE PHOSPHORUS FREE ORGANIC FERTILIZER AS NEEDED. AS OF JANUARY 1, 2012 THE NYSDEC RESTRICTS THE USE OF PHOSPHORUS FERTILIZER ON LAWNS OR NON-AGRICULTURAL TURF. IT IS RECOMMENDED THAT A SOIL TEST BE CONDUCTED IN ORDER TO ENSURE THE USE OF AN APPROPRIATE FERTILIZER. ADDITIONALLY, O FERTILIZER SHOULD BE APPLIED WITHIN TWENTY (2) FEET OF A WATER BODY OR ON PAVED SURFACES. APPLICATION RATE SHALL BE IN ACCORDANCE TO MANUFACTURES RECOMMENDATIONS AND SHOULD BE APPLIES IN THE FOLLOWING SPRING PLANTING SEASON.

SEEDING SCHEDULE:

ERN MX-154 FLOODPLAIN MIX — 48,307 SF

APPLY AT A RATE OF TWENTY (20) LBS. PER ACRE WITH A COVER CROP OF GRAIN RYE AT THIRTY (30) LBS. PER ACRE. PERCENTAGES ARE BASED UPON THE SEED MIX, AS OF SEPTEMBER 2018, DEVELOPED BY ERNST CONSERVATION SEEDS, INC., 8884 MERCER PIKE, MEADVILLE PENNSYLVANIA 16335. PLEASE NOTE, SPECIES PERCENTAGES ARE APPROXIMATE AND MAY BE ROUNDED TO THE NEXT WHOLE NUMBER.

ANDROPOGON GERARDII / BIG BLUE STEM	10%
ASCLEPIAS INCARNATA / SWAMP MILKWEED	1%
ASTER NOVAE-ANGLIAE / NEW ENGLAND ASTER	1%
CAREX LURIDA / LURID SEDGE	4%
CAREX SCOPARIA / BROOM SEDGE	4%
CAREX VULPINOIDEA / BROWN FOX SEDGE	23%
DESMODIUM PANICULATUM / NAKROW-LEAF TICK TREFOIL	1%
ELYMUS RIPARIUS / RIVERBANK RYE	20%
EUPATORIUM FISTOLOSUM / JOE PYE WEED	1%
EUPATORIUM PERFOLIATUM / COMMON BONESET	1%
HELENIUM AUTUMNALE / SNEEZEWEED	1%
JUNCUS EFFUSUS / SOFT RUSH	3%
MIMULUS RINGENS / MONKEYFLOWER	1%
MONARDA FISTULOSA / BERGAMOT	1%
PANICUM CLANDESTINUM 'TIOGA' / TIOGA DEER TONGUE	21%
PANICUM VIRGATUM 'SHAWNEE' / SHAWNEE SWITCH GRASS	1%
VERBENA HASTATA / BLUE VERVAIN	3%
VERNONIA NOVEBORACENSIS / COMON IRONWEED	1%

ERNMX-131 / OBL WETLAND MIX — 22,679 SF

APPLY AT A RATE OF TWENTY (20) LBS. PER ACRE. PERCENTAGES ARE BASED UPON THE SEED MIX, AS OF SEPTEMBER 2018, DEVELOPED BY ERNST CONSERVATION SEEDS, INC., 8884 MERCER PIKE, MEADVILLE PENNSYLVANIA 16335. PLEASE NOTE, SPECIES PERCENTAGES ARE APPROXIMATE AND MAY BE ROUNDED TO THE NEXT WHOLE NUMBER.

ALISMA SUBCORDATUM / WATER PLANTAIN	1%
ASCLEPIAS INCARNATA / SWAMP MILKWEED	1%
ASTER PUNICEUS / PURPLESTEM ASTER	1%
ASTER UMBELLATUS / FLAT-TOPPED ASTER	1%
CAREX LUPULINA / HOP SEDGE	15%
CAREX LURIDA / LURID SEDGE	19%
CAREX SCOPARIA / BROOM SEDGE	9%
CAREX VILPINOIDEA / BROWN FOX SEDGE	35%
CHELONE GLABRA / WHITE TURTLE-HEAD	1%
EUPATORIUM MACULATUM / JOE PYE WEED	1%
EUPATORIUM PERFOLIATUM / COMMON BONESET	1%
IRIS VERSICOLOR / BLUE FLAG	1%
JUNCUS EFFUSUS / SOFT RUSH	3%
LUDWIGIA ALTERNIFOLIA / SEEDBOX	1%
MIMULUS RINGENS / MONKEYFLOWER	1%
ONOCLEA SENSIBILIS / SENSITIVE FERN	1%
SCIRPUS CYPERINUS / WOOL GRASS	1%
SCIRPUS VALIDUS / GREAT BULRUSH	1%
SOLIDAGO PATULA / SWAMP GOLDENROD	1%
SPARGANIUM AMERICANUM / EASTERN BUR REED	3%
SPARGANIUM EURYCARPUM / COMMON BUR REED	5%
VERBENA HASTATA / BLUE VERVAIN	4%

ERNMX-155 / DEER RESISTENT MEADOW MIX — 104,311 SF

APPLY AT A RATE OF TWENTY (20) LBS. PER ACRE. PERCENTAGES ARE BASED UPON THE SEED MIX, AS OF SEPTEMBER 2018, DEVELOPED BY ERNST CONSERVATION SEEDS, INC., 8884 MERCER PIKE, MEADVILLE PENNSYLVANIA 16335. PLEASE NOTE, SPECIES PERCENTAGES ARE APPROXIMATE AND MAY BE ROUNDED TO THE NEXT WHOLE NUMBER.

ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED	2%
BAPTISIA AUSTRALIS / BLUE FALSE INDIGO	1%
CHAMAECRISTA FASCICULATA / PRAIRIE SENNA	4%
COREOPSIS LANCEOLATA / LANCELEAF TICKSEED	2%
ECHINACEA PURPUREA / PURPLE CONEFLOWER	4%
ELYMUS VIRGINICUS / VIRGINIA WILD RYE	19%
HELIOPSIS HELIANTHOIDES / FALSE SUNFLOWER	2%
LIATRIS SPICATA / SPIKE GAYFEATHER	3%
MONARDA FISTULOSA / BERGAMOT	1%
PENSTEMON DIGITALIS / BEARD-TONGUE	3%
PYCNANTHEMUM INCANUM / HOARY MOUNTAIN MINT	1%
RUDBECKIA HIRTA / BLACK-EYED SUSAN	3%
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS	38%
SENNA HEBECARPA / WILD SENNA	1%
SOLIDAGO JUNCEA / EARLY GOLDENROD	1%
SOLIDAGO NEMORALIS / OLD FIELD GOLDENROD	1%
SORGHASTRUM NUTANS / INDIAN GRASS	9%
SYMPHYOTRICHUM OBLONGIFOLIUM / FALL ASTER	3%
TRAPESCANTIA OHIENSIS / BLUE JACKET	3%
TRIDENS FLAVUS / PURPLETOP	3%

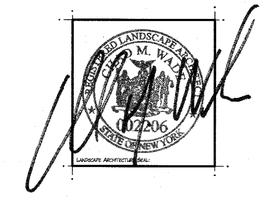
PERMANENT TURF SEEDING — 194,785 SF

APPLY AT A RATE OF FOUR (4) LBS. PER 1,000 SQ.FT.

FESTUCA RUBRA FALLAX / CHEWING'S FESCUE	15%
FESTUCA RUBRA RUBRA / CREEPING RED FESCUE	65%
LOLIUM PERENNE / PERENNIAL RYEGRASS	20%

PLANT SCHEDULE:

DECIDUOUS TREES	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
ACE BPL	39	OCTOBER GLORY RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	B & B	2" TO 2.5" CALIPER	PER PLAN	40' TO 50'	30' TO 40'	4/PP-8
AME GRA	24	AUTUMN BRILLIANCE APPLE SERVICEBERRY WHITE BLOOMS MARCH THROUGH APRIL. MULTITRUNK VARIETY, LOWER BRANCHES SHALL BE PRUNED TO DEVELOP A TREE LIKE HABIT.	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	B & B	10' TO 12' HEIGHT	PER PLAN	20' TO 25'	20' TO 25'	4/PP-8
BET HER	39	HERITAGE RIVER BIRCH MULTI-TRUNK VARIETY.	BETULA NIGRA 'HERITAGE'	B & B	14' TO 16' HEIGHT	20'	40' TO 70'	40' TO 70'	4/PP-8
CAR AME	21	AMERICAN HORNBEAM	CARPINUS CAROLINIANA	B & B	10' TO 12' HEIGHT	30'	20' TO 35'	20' TO 35'	4/PP-8
CER EAS	37	EASTERN REDBUD MULTI-TRUNK PURPLE-PINK BLOOMS IN LATE APRIL TO EARLY MAY.	CERCIS CANADENSIS	B & B	10' TO 12' HEIGHT	PER PLAN	20' TO 30'	25' TO 35'	4/PP-8
GIN PSG	8	PRINCETON SENTRY GINGKO	GINKGO BILOBA 'PRINCETON SENTRY'	B & B	1.5" TO 2"	PER PLAN	20' TO 30'	10' TO 15'	4/PP-8
NYS SYL	27	BLACK GUM	NYSSA SYLVATICA	B & B	2.5" TO 3" CALIPER	20'	30' TO 50'	20' TO 30'	4/PP-8
OST VIR	32	AMERICAN HOPHORNBEAM	OSTRYA VIRGINIANA	B & B	2" TO 2.5" CALIPER	PER PLAN	25' TO 40'	20' TO 30'	4/PP-8
QUE BIC	3	SWAMP WHITE OAK	QUERCUS BICOLOR	B & B	2" TO 2.5" CAL.	PER PLAN	50' TO 60'	50' TO 60'	4/PP-8
QUE PAL	42	PIN OAK LOWER BRANCHES TEND TO DROOP WITH AGE, PRUNING IS RECOMMENDED IN AREAS OF PEDESTRIAN AND PARKING ACCESS.	QUERCUS PALUSTRIS	B & B	2" TO 2.5" CALIPER	40'	50' TO 70'	40' TO 60'	4/PP-8
ULM PRI	22	AMERICAN ELM	ULMUS AMERICANA 'PRINCETON'	B & B	2.5" TO 3" CALIPER	PER PLAN	50' TO 70'	30' TO 50'	4/PP-8
EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
JUN EAS	117	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	B & B	5' TO 7' HEIGHT	12'	30' TO 65'	8' TO 25'	5/PP-8
PIN STR	54	WHITE PINE	PINUS STROBUS	B & B	7' TO 9' HEIGHT	16'	50' TO 80'	20' TO 40'	5/PP-8
THU GRE	66	GREEN GIANT ARBORVITAE	THUJA STANDISHII X PLICATA 'GREEN GIANT'	B & B	5' TO 7' HEIGHT	7'	50' TO 60'	12' TO 18'	
DECIDUOUS SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
CLE HUM	295	SUMMERSWEET WHITE BLOOMS JULY THROUGH AUGUST.	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	POT	3 GALLON	4'	2' TO 4'	3' TO 5'	6/PP-8
COT BEA	76	BEARBERRY COTONEASTER	COTONEASTER DAMMERI 'CORAL BEAUTY'	POT	3 GALLON	6'	0.75' TO 1'	4' TO 6'	6/PP-8
HAM VIR	99	COMMON WITCH HAZEL YELLOW BLOOMS OCTOBER THROUHG DECEMBER.	HAMAMELIS VIRGINIANA	B & B	30" TO 36" HEIGHT			15' TO 20'	6/PP-8
SYR KIM	156	MISS KIM KOREAN LILAC PURPLE BLOOMS IN SPRING.	SYRINGA PUBESCENS 'MISS KIM'	POT	3 GALLON	75"	4' TO 9'	5' TO 7'	6/PP-8
VIB ARR	126	VIBURNUM	VIBURNUM PENTATUM	POT	5 GALLON	6'	6' TO 10'	6' TO 10'	6/PP-8
EVERGREEN SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
JUN GOL	245	GOLD COAST JUNIPER	JUNIPERUS CHINENSIS 'GOLD COAST' TM	POT	3 GALLON	5'	3'	5'	6/PP-8
JUN TOP	76	MINT JULEP CHINESE JUNIPER	JUNIPERUS CHINENSIS 'MONLEP' TM	POT	3 GALLON	7'	4' TO 6'	6' TO 8'	6/PP-8
RHO P10	277	P.J.M. RHODODENDRON PINK BLOOM IN APRIL.	RHODODENDRON X P.J.M.	POT	3 GALLON	5'	3' TO 7'	3' TO 6'	6/PP-8
VIB LEA	87	LEATHERLEAF VIBURNUM YELLOWISH-WHITE BLOOMS MID-MAY.	VIBURNUM RHYTIDOPHYLLUM	B & B	30" TO 36" HEIGHT	7'	6' TO 10'	6' TO 10'	6/PP-8
PERENNIALS / GRASSES	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
ARU IUD	648	CHANTILLY LACE GOATSBEARD CREAMY WHITE FLOWERS JUNE THROUGH SEPTEMBER.	ARUNCUS X 'CHANTILLY LACE'	POT	4"	2'	2' TO 3'	3' TO 4'	6/PP-8
COR HEA	828	PINK COREOPSIS 18" HEIGHT. WHITE WITH PINK CENTER, BLOOMS EARLY SUMMER THROUGH FALL.	COREOPSIS ROSEA 'HEAVENS GATE'	POT	4"	2'	16" TO 18"	18" TO 24"	6/PP-8
LEU BEC	1,302	SHASTA DAISY WHITE BLOOMS WITH YELLOW CENTERS JULY SEPTEMBER.	LEUCANTHEMUM X SUPERBUM 'BECKY'	POT	4"	3'	3' TO 4'	2' TO 3'	6/PP-8
GROUND COVERS	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
CAL MER	384	MERLIN SCOTCH HEATHER ROSE PINK TO PURPLEISH PINK BLOOMS JULY THROUGH SEPTEMBER	CALLUNA VULGARIS 'MERLIN'	POT	4"	3'	2' TO 3'	2' TO 3'	6/PP-8
LEU ZEB	335	SCARLETTA FETTERBUSH	LEUCOTHOE FONTANESIANA 'ZEBLIST TM	POT	4"	3'	2' TO 3'	2' TO 3'	6/PP-8



DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR — SHEET NO.

CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	8 OF 10
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE LISED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SETS).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORISIN

REVISIONS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 476 - 8256
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 363 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

PROJECT TITLE:

THE POLO CLUB
TOWN OF NEWBURGH

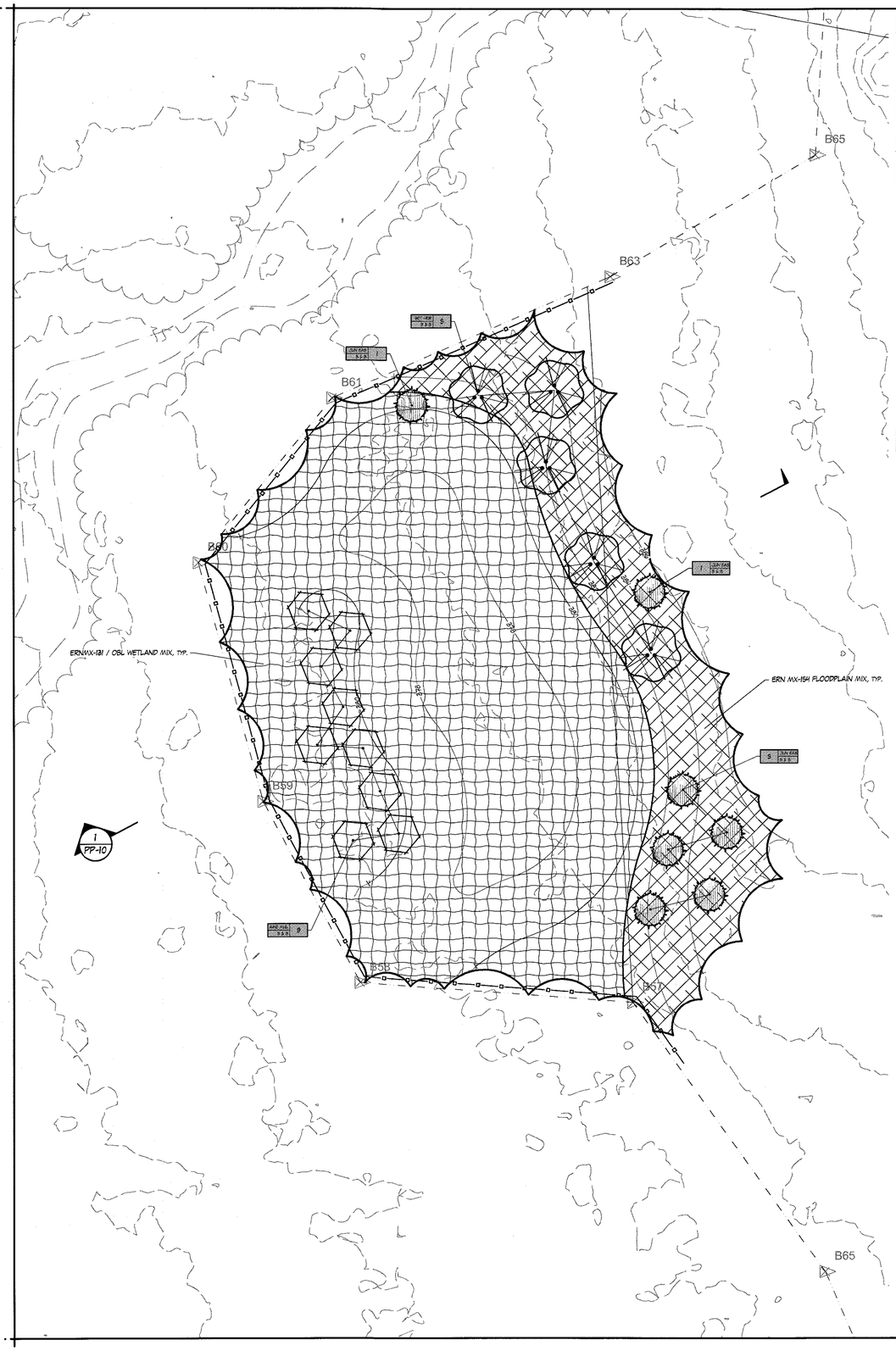
PROJECT SPONSOR:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

SHEET TITLE:

PLANTING PLAN DETAILS AND NOTES

CAD REFERENCE:	SHEET NO:
OVERALLPLANTINGPLAN.DWG	PP-9
PROJECT NUMBER: 2020.01	DRAWN/CHECKED BY: C.M.W. / C.M.W.



PLANT SCHEDULE:

DECIDUOUS TREES	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
BET HER	5	HERITAGE RIVER BIRCH MULTI-TRUNK VARIETY.	BETULA NIGRA 'HERITAGE'	B & B	14' TO 16' HEIGHT	PER PLAN	40' TO 70'	40' TO 70'	2/PP-8

EVERGREEN TREES	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
JUN EAS	7	EASTERN RED CEDAR	JUNIPERUS VIRGINIANA	B & B	5' TO 7' HEIGHT	PER PLAN	30' TO 65'	8' TO 25'	3/PP-8

DECIDUOUS SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	SIZE	SPACING	MATURE HEIGHT	MATURE WIDTH	DETAIL
AME MUL	9	SHADBLOW SERVICEBERRY MULTITRUNK	AMELANCHIER CANADENSIS	B & B	8' TO 10' HEIGHT	PER PLAN	25' TO 30'	15' TO 20'	4/PP-8

SEEDING SCHEDULE:

ERN MX-15H FLOODPLAIN MIX — 7,256 SF

APPLY AT A RATE OF TWENTY (20) LBS. PER ACRE WITH A COVER CROP OF GRAIN RYE AT THIRTY (30) LBS. PER ACRE. PERCENTAGES ARE BASED UPON THE SEED MIX, AS OF SEPTEMBER 2018, DEVELOPED BY ERNST CONSERVATION SEEDS, INC., 8884 MERCER PIKE, MEADVILLE PENNSYLVANIA 16335. PLEASE NOTE, SPECIES PERCENTAGES ARE APPROXIMATE AND MAY BE ROUNDED TO THE NEXT WHOLE NUMBER.

ANDROPOGON GERARDII / BIG BLUE STEM
ASCLEPIAS INCARNATA / SWAMP MILKWEED
ASTER NOVAE-ANGLIAE / NEW ENGLAND ASTER
CAREX LURIDA / LURID SEDGE
CAREX SCOPARIA / BROOM SEDGE
CAREX VULPINOIDEA / BROWN FOX SEDGE
DESMODIUM PANICULATUM / NARROW-LEAF TICK TREFOIL
ELYMUS RIPARIUS / RIVERBANK RYE
EUPATORIUM FISTOLOSUM / JOE PYE WEED
EUPATORIUM PERFOLIATUM / COMMON BONESET
HELENIUM AUTUMNALE / SNEEZEWEED
JUNCUS EFFUSUS / SOFT RUSH
MIMULUS RINGENS / MONKEYFLOWER
MONARDA FISTULOSA / BERGAMOT
PANICUM CLANDESTINUM 'TIOGA' / TIOSA DEER TONGUE
PANICUM VIRGATUM 'SHAWNEE' / SHAWNEE SWITCH GRASS
VERBENA HASTATA / BLUE VERVAIN
VERNONIA NOVEBORACENSIS / COMON IRONWEED

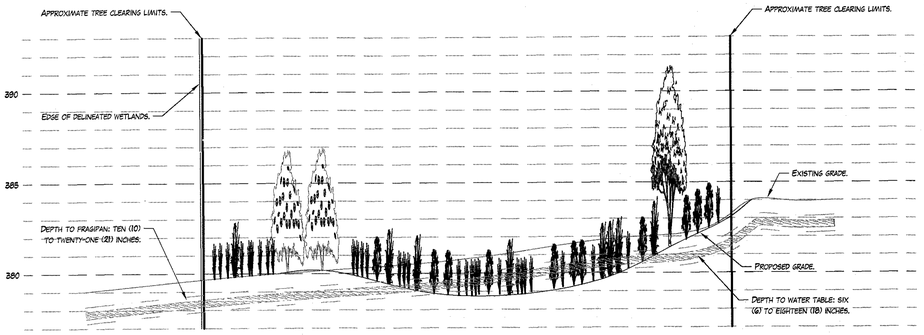
ERNWX-131 / OBL WETLAND MIX — 19,988 SF

APPLY AT A RATE OF TWENTY (20) LBS. PER ACRE. PERCENTAGES ARE BASED UPON THE SEED MIX, AS OF SEPTEMBER 2018, DEVELOPED BY ERNST CONSERVATION SEEDS, INC., 8884 MERCER PIKE, MEADVILLE PENNSYLVANIA 16335. PLEASE NOTE, SPECIES PERCENTAGES ARE APPROXIMATE AND MAY BE ROUNDED TO THE NEXT WHOLE NUMBER.

ALISMA SUBCORDATUM / WATER PLANTAIN
ASCLEPIAS INCARNATA / SWAMP MILKWEED
ASTER PUNICEUS / PURPLESTEM ASTER
ASTER UMBELLATUS / FLAT-TOPPED ASTER
CAREX LUPULINA / HOP SEDGE
CAREX LURIDA / LURID SEDGE
CAREX SCOPARIA / BROOM SEDGE
CAREX VULPINOIDEA / BROWN FOX SEDGE
CHELONE GLABRA / WHITE TURTLEHEAD
EUPATORIUM MACULATUM / JOE PYE WEED
EUPATORIUM PERFOLIATUM / COMMON BONESET
IRIS VERSICOLOR / BLUE FLAG
JUNCUS EFFUSUS / SOFT RUSH
LUDWIGIA ALTERNIFOLIA / SEEDBOX
MIMULUS RINGENS / MONKEYFLOWER
ONOCLEA SENSIBILIS / SENSITIVE FERN
SCIRPUS CYPERINUS / WOOL GRASS
SCIRPUS VALIDUS / GREAT BULRUSH
SOLIDAGO PATULA / SWAMP GOLDENROD
SPARGANIUM AMERICANUM / EASTERN BUR REED
SPARGANIUM EURYCARPUM / COMMON BUR REED
VERBENA HASTATA / BLUE VERVAIN

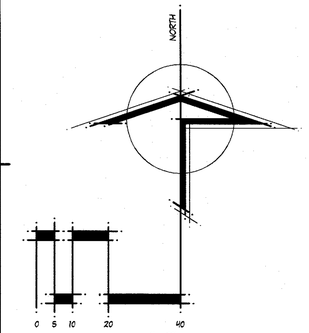
WETLAND MITIGATION NOTES:

SYMBOL	DESCRIPTION
WM-101	OWNER, CONTRACTOR, AND ANY SUBCONTRACTORS SHALL ADHERE TO THE CONDITIONS OF THE U.S. ARMY CORPS. OF ENGINEERS NATIONWIDE PERMIT EFFECTIVE MARCH 19, 2017, AND N.Y.S. DISTRICT CONDITIONS DATED MARCH 21, 2017, AND ANY ADDENDA.
WM-102	THE DURATION OF CONSTRUCTION SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE RELATED TO A DISTURBANCE WITHIN THE EXISTING WETLAND BOUNDARY AND STREAM CORRIDORS, AS APPLICABLE.
WM-103	EROSION AND SEDIMENT CONTROL PRACTICES AND POLLUTION PREVENTION MEASURES, COLLECTIVELY KNOWN AS BEST MANAGEMENT PRACTICES ("BMPs"), SHALL BE INSTALLED PRIOR TO ANY GROUND DISTURBANCE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN(S), SWPPP, IF APPLICABLE, AND THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
WM-104	LOW GROUND PRESSURE CONSTRUCTION EQUIPMENT SHALL BE REQUIRED FOR ALL WORK ASSOCIATED WITH WETLAND MITIGATION, INCLUDING ALL NECESSARY ACCESS ROADS. IN THE EVENT LOW GROUND PRESSURE EQUIPMENT IS NOT PRACTICABLE, TRADITIONAL CONSTRUCTION EQUIPMENT MAY BE USED IN CONJUNCTION WITH TIMBER MATS IN AN EFFORT TO MINIMIZE COMPACTION. TIMBER MATS TREATED WITH PENTACHLOROPHENOL OR CREOSOTE SHALL NOT BE USED.
WM-105	REFUELING OF CONSTRUCTION EQUIPMENT MUST TAKE PLACE AT LEAST 300 FEET AWAY FROM WETLAND BOUNDARIES AND WATERCOURSES.
WM-106	TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN THE FINAL GRADING. SUBSOIL SHALL BE EXCAVATED, AND APPROPRIATELY DISCARDED OFFSITE, TO A MINIMUM DEPTH OF TWELVE (12) INCHES BELOW THE FINISHED GRADE, THE SUBSOIL SHALL BE ROUGH GRADED USING LOW GROUND PRESSURE CONSTRUCTION EQUIPMENT.
WM-107	WETLAND TOPSOIL SHALL BE PLACED OVER THE PREPARED SUBSOIL SURFACE USING LOW GROUND PRESSURE CONSTRUCTION EQUIPMENT. THE WETLAND TOPSOIL WILL BE UNIFORMLY GRADED TO A MINIMUM THICKNESS OF TWELVE (12) INCHES.
WM-108	MICROTOPOGRAPHY WITHIN THE WETLAND TOPSOIL LAYER SHALL BE GRADED INTO THE FINISHED SURFACE AS SPECIFIED ON THE GRADING PLAN. THE SURFACE OF THE PLACED WETLAND TOPSOIL WILL BE CONTOURED USING A LOW GROUND PRESSURE CONSTRUCTION EXCAVATOR EQUIPPED WITH A FINISH BUCKET. THE FINISH WETLAND SURFACE WILL BE FORMED BY CREATING PITS AND MOUNDS RANGING IN HEIGHT OF SIX (6) INCHES BELOW THE FINAL GRADE AND DEPTH OF SIX (6) INCHES ABOVE THE FINAL GRADE, RESPECTIVELY. THE PEAKS OF EACH MICROTOPOGRAPHY MOUND SHALL BE SPACED APPROXIMATELY TWENTY (20) FEET APART ON CENTER.
WM-109	WOODY DEBRIS (E.G., LOGS AND BRANCHES) GENERATED DURING CLEARING AND GRUBBING WORK SHALL BE SCATTERED THROUGHOUT THE WETLAND MITIGATION AREA AT A RATE OF FIFTY (50) UNITS EACH OF LOGS AND BRANCHES DISTRIBUTED EVENLY PER ACRE OF WETLAND MITIGATION AREA TO ADD STRUCTURE, ADDITIONAL MICROTOPOGRAPHY, AND A LONG-TERM SOURCE OF DECAYING ORGANIC MATERIAL. LOGS SHALL MEAN WOODY DEBRIS TWELVE (12) TO THIRTY-SIX (36) INCHES IN DIAMETER AND EIGHT (8) TO TWENTY (20) FEET IN LENGTH. BRANCHES SHALL MEAN WOODY DEBRIS TWO (2) TO TWELVE (12) INCHES IN DIAMETER AND MINIMUM EIGHT (8) FEET IN LENGTH. IT IS PREFERRED THAT BRANCHES RETAIN SMALLER OFFSHOOTS AND LEAVES WHERE POSSIBLE.
WM-110	THE ORANGE COUNTY SOIL SURVEY INDICATES THAT THE MITIGATION AREA IS COMPRISED CHIEFLY OF ERIE EXTREMELY STONY SOILS, GENTLY SLOPING (ESB). THIS SOIL TYPE IS WELL SUITED FOR WETLAND MITIGATION SINCE, (1) ESB SOILS ARE HYDROLOGIC SOILS GROUP "D". (2) ARE CLASSIFIED AS SOMEWHAT POORLY DRAINED SILT LOAM. (3) THE DEPTH TO WATER TABLE IS SIX (6) TO EIGHTEEN (18) INCHES, PERCHED ABOVE THE FRAGIPAN DURING SPRING AND OTHER WET PERIODS. (4) PERMEABILITY IN ESB SOILS IS MODERATELY LOW IN MOST CASES. LOW PERMEABILITY RESULTS IN WET SOILS FOR PROLONGED PERIODS.



1 WETLAND MITIGATION CROSS-SECTION A-A

HORIZONTAL SCALE: 1" = 20', VERTICAL SCALE: 1" = 5'



1" = 20'
ONLY ON 24" X 36" PAGE

DRAWING STATUS

ISSUE DATE: NOVEMBER 11, 2020

THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	SHEET NO.
CONCEPT APPROVAL	OF
PRELIMINARY APPROVAL	OF
FINAL APPROVAL	OF
PLANNING BOARD APPROVAL	OF
ZONING BOARD OF APPEALS APPROVAL	OF
BIDDING	OF
CONSTRUCTION	OF
OTHER	OF

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS IN THE DENOTED PLAN SET(S).

DATE	DESCRIPTION
11/06/2020	PB CONSULTANT COMMENTS
09/29/2020	PB CONSULTANT COMMENTS
05/15/2020	DATE OF ORIGIN

REVISIONS:

LANDARCH STUDIOS, P.L.L.C.
LANDSCAPE ARCHITECTURE & LAND PLANNING CONSULTANTS

NEW YORK STATE LICENSE NO. 002206
MEMBER:
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
ORANGE COUNTY CHAMBER OF COMMERCE
CALL US: (845) 470 - 8660
FOLLOW US: @LANDARCHSTUDIOS
MAIL US: 323 N. MONTGOMERY STREET NEWBURGH, NEW YORK 12550
NETWORK WITH US: CHAD M. WADE R.L.A.
VIEW US: WWW.LANDARCHSTUDIOS.COM
EMAIL US: INFO@LANDARCHSTUDIOS.COM
LIKE US: LANDARCH STUDIOS, P.L.L.C.

THE POLO CLUB
TOWN OF NEWBURGH

PROJECT TITLE:

MEADOW CREEK DEVELOPMENT, LLC
56 FAR HORIZONS DRIVE
NEWBURGH, NEW YORK 12550

PROJECT SPONSOR:

WETLAND MITIGATION PLAN

SHEET TITLE:

CAD REFERENCE: WETLANDMITIGATION.DWG

SHEET NO.: PP-10

PROJECT NUMBER: 2020.01

DRAWN/CHECKED BY: C.M.W. / C.M.W.